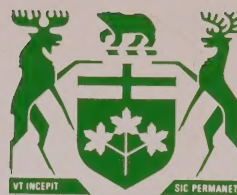
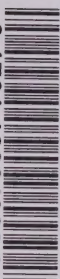


3 1761 12064026 3



ONTARIO

Legislative Assembly

Legislative Assembly

SELECT COMMITTEE ON HIGHWAY SAFETY

Fred Young, MPP
Chairman

FINAL REPORT
SEPTEMBER 1977

CA20N
X02

-77537



Digitized by the Internet Archive
in 2025 with funding from
University of Toronto

<https://archive.org/details/31761120640263>

CA20N
XC2
-77H37

TO: The Honourable Russell D. Rowe,
Speaker of the Legislative Assembly of the Province of Ontario

Sir:

We, the undersigned members of the Committee appointed by the Legislative Assembly of the Province of Ontario on May 25th, 1976, and re-appointed on June 28th, 1977, to study the overall question of highway safety in all its phases, including the problems associated with drinking and driving, the methods of accident prevention now in general use, driver education in the school system and public education, and to examine and consider any proposals designed to reduce the number of highway accidents submitted to the Committee and to report on methods to achieve greater safety on the highway; to report to the Legislature on its recommendations, have the honour to submit the attached report.

R.D. Kennedy

R. Douglas Kennedy, M. P. P.
Mississauga South
Vice Chairman

Bob Mackenzie

Bob Mackenzie, M. P. P.
Hamilton East

Ted Bounsall

Ted Bounsall, M. P. P.
Windsor-Sandwich

George R. McCague

George McCague, M. P. P.
Dufferin-Simcoe

Mike Breugh

Mike Breugh, M. P. P.
Oshawa

Ron. McNeil

Ron McNeil, M. P. P.
Elgin

Jack Johnson

Jack Johnson, M. P. P.
Wellington-Dufferin-Peel

Robert F. Nixon

Robert F. Nixon, M. P. P.
Brant-Oxford-Norfolk

Terry Jones

Terry Jones, M. P. P.
Mississauga North

Jack Riddell

Jack Riddell, M. P. P.
Huron-Middlesex

Fred Young

Fred Young, M. P. P.
Yorkview
Chairman

THE SELECT COMMITTEE ON HIGHWAY SAFETY

THE LEGISLATIVE ASSEMBLY OF ONTARIO

FIRST SESSION: THIRTY-FIRST PARLIAMENT

MEMBERS

Fred Young, M. P. P., Chairman	..	..	..	..	..	Yorkview
Ted Bounsall, M. P. P.	..	..	..	..	..	Windsor-Sandwich
Mike Breagh, M. P. P.	..	..	..	..	..	Oshawa
Jack Johnson, M. P. P.	..	..	..	..	..	Wellington-Dufferin-Peel
Terry Jones, M. P. P.	..	..	..	..	..	Mississauga North
R. Douglas Kennedy, M. P. P.	..	..	..	..	..	Mississauga South
Bob Mackenzie, M. P. P.	..	..	..	..	..	Hamilton East
George McCague, M. P. P.	..	..	..	..	..	Dufferin-Simcoe
Ron McNeil, M. P. P.	..	..	..	..	..	Elgin
Robert F. Nixon, M. P. P.	..	..	..	..	..	Brant-Oxford-Norfolk
Jack Riddell, M. P. P.	..	..	..	..	..	Huron-Middlesex

STAFF

Counsel:	Alan M. Schwartz	Siegal, Fogler, Barristers and Solicitors
Consultant:	James D. Fisher	The Canada Consulting Group
Clerk of the Committee:	Andrew Richardson	
Research Coordinator:	Arna R. Crocker	
Liaison Officer:	Harvey D. Mosher	Ministry of Transportation and Communications

During the course of the Committee's hearings, Mr. Keith Norton was replaced by Mr. Jones and Messrs. William Ferrier and Philip Givens did not return as Members of the First Session of the Thirty-first Parliament.

ACKNOWLEDGEMENT

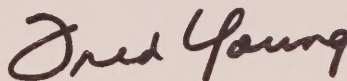
While it was impossible to cover the entire field of highway safety in the time available since the Committee's appointment, we believe that the matters dealt with - along with the accompanying recommendations - are of vital importance to the people of Ontario. We urge immediate action.

Two members of the Committee, William Ferrier and Phil Givens, served for most of the Committee's term but were unable to complete the final few weeks. Both made thoughtful and balanced contributions to our deliberations. Both were strong members of the team.

The Committee highly commends the work and dedication of its staff: Alan Schwartz, brilliant counsel; Jim Fisher, skilled consultant; Arna Crocker, tireless research assistant; and Andy Richardson, meticulous Committee secretary. All worked beyond the call of duty on a project in which they believed.

The Ministry of Transportation and Communications - as well as other agencies of both provincial and federal governments - gave full cooperation. Their help was deeply appreciated. Harvey Mosher, of the Ministry of Transportation and Communications staff, was made available for full-time liaison work with the Committee.

Expert witnesses from Canada, the United States and Europe gave unstintingly of their wisdom and expertise. Their deep concern for positive action towards greater road safety is reflected by the fact that while paid out-of-pocket expenses, not one of them asked for consulting fees. For this generosity, as well as for their time and advice, the Committee is extremely grateful.



Fred Young
Chairman

FINAL REPORT OF
THE SELECT COMMITTEE ON HIGHWAY SAFETY

TABLE OF CONTENTS

	<u>Page:</u>
SECTION I: INTRODUCTION AND SUMMARY	I-1
SECTION II: DRIVER TRAINING	II-1
Maximizing the Impact of the High School Driver Training Curriculum	II-2
Improving the Quality of Commercial Driving Schools	II-8
Ensuring That Motorcyclists Have Adequate Skills	II-13
SECTION III: TESTING AND LICENSING	III-1
The First Licence: Gaining the Right to Solo	III-2
Using Demerit Points to Maintain an Acceptable Standard	III-4
Taking Early Steps to Help Young Drivers	III-7
Coping With Physical Disabilities	III-9
Exhibits	
SECTION IV: THE IMPAIRED DRIVER	IV-1
Prevention: Reducing the Size of the Problem	IV-3
Managing the Drinking-Driving Problem	IV-8
Rehabilitation: Taking Effective Action With Convicted Offenders	IV-12
Exhibits	

TABLE OF CONTENTS

(continued)

	<u>Page:</u>
SECTION V: THE ENFORCEMENT SYSTEM	V-1
Increasing Police Effectiveness	V-2
Improving the Adjudicative Process	V-8
Coordinating the Traffic Law Enforcement System	V-11
SECTION VI: THE AUTOMOBILE	VI-1
Making New Vehicles Safer	VI-3
Maintaining Vehicles in a Safe Condition	VI-13
Exhibits	
SECTION VII: THE SCHOOL BUS	VII-1
Improving School Bus Safety	VII-2
Introducing School Bus Safety Features	VII-4
Exhibit	
SECTION VIII: THE TRUCK	VIII-1
Establishing the Role of the Truck in Highway Safety	VIII-1
Making Safety a More Explicit Part of the Regulatory Machinery	VIII-6
Setting Specific New Truck Safety Standards	VIII-11
Ensuring Proper Maintenance	VIII-19
Exhibit	
SECTION IX: THE ROAD	IX-1
Making the Road Environment Safer	IX-2
Managing the Flow of Traffic	IX-6
The Highway in Ontario	IX-8

TABLE OF CONTENTS

(continued)

	<u>Page:</u>
SECTION X: ADMINISTRATION AND RESEARCH	X-1
Establishing a Point of Focus Within the Provincial Government	X-2
Gaining the Full Benefit From Research	X-8

APPENDICES:

Appendix A	Terms of Reference
Appendix B	Interim Report
Appendix C	Witnesses Appearing Before The Committee
Appendix D	Witness Appearance Schedule
Appendix E	Recommendations of the Committee

Introduction and Summary

Introduction and Summary

SECTION I

INTRODUCTION AND SUMMARY

This Select Committee was appointed on May 25, 1976, with Mr. Fred Young, M. P. P. (Yorkview), as chairman, to study the overall question of highway safety in all its phases and to report on methods to achieve greater safety on the highway. As originally constituted, the Committee comprised 12 members in addition to the chairman.

The need to improve road safety in Ontario was and is plain.

§ In a normal year, more than 200,000 reported accidents occur on the Province's roads, involving about 10% of all registered motor vehicles

§ As many as one family in 20 will have a member injured on the road each year, and one in 1,000 a member killed. In 1976, 83,736 persons were injured in 58,028 accidents on the Province's roads, and another 1,511 died in 1,265 fatal accidents

§ Accidents on the roads are the fourth leading killer in the Province. They are the leading cause of death of younger people - 46.7% of the victims in 1976 were under 25.

The toll is both tragic and costly. The survivors of road accidents and their families bear a high cost in terms of suffering, disability, loss of income and disruption of family life. Society bears the cost of the loss of the victims' productivity and of damage to property and the environment. The Ministry of Transportation and Communications, assigning arbitrary and admittedly conservative values to lives lost and injuries and damage suffered, has estimated the cost at more than \$400,000,000 annually.

The Committee began its investigation of the road safety problem in the Province by developing a general overview of the concerns of the public, police, transportation experts and special interest groups through public hearings and private submissions. It found strong concern among the public about the "carnage on the highways", and agreement that something must be done about it, but an uncertainty about the best course of action. It concluded that the people of Ontario are looking to government for leadership and action in this vital area.

The first phase of the Committee's work concluded with the interim report submitted in November 1976 (attached to this report as Appendix B). In its interim report, the Committee established as its goal the development of a program that would make Ontario a world leader in road safety. The Committee recommended that its period of operation be extended beyond the December 31, 1976 deadline set out in its terms of reference. It also made recommendations for immediate action on four specific road safety problems.

- § To ensure adequate protection for riders of mopeds (motorized bicycles or pedal-assisted motorcycles), the Committee recommended that all moped riders be required to wear an approved motorcycle helmet
- § To reduce the incidence of driving while impaired - 14.5% of drivers in fatal accidents in Ontario in 1976 were impaired, and another 11.7% had been drinking - the Committee recommended that the Government prepare a publication outlining the laws relating to impaired driving, and distribute it to all motorists renewing motor vehicle licence plates for 1977
- § To ensure that drivers of heavy commercial vehicles have the necessary qualifications, the Committee recommended that the Ministry of Transportation and Communications begin implementation of a system of classified driver's licences in 1977
- § To reduce car theft, and in particular "joy riding" by inexperienced juvenile drivers, the Committee recommended that the Government bring in legislation imposing a penalty against any person who leaves keys in the ignition lock of an unattended motor vehicle.

In the second phase of its work, the Committee held additional hearings that were organized around specific road safety issues, and invited leading experts to testify on these issues. The Committee spent a week, for example, on an in-depth examination of the question of the impaired driver. The Committee further studied these issues on visits to several road safety policy and research centres. In Washington, D.C., the Committee met with officials of the National Highway Traffic Safety Administration of the U.S. Department of Transportation and the Insurance Institute for Highway Safety. In Detroit, the Committee spoke with safety experts at Chrysler, Ford and General Motors about restraint systems, research safety vehicles and the safety aspects of automobile engineering. Just before completing its work, the Committee witnessed a demonstration by General Motors of Canada Limited in Oshawa of the safety device known as the "air bag".

The Committee was in the process of preparing this final report when the Legislative Assembly was dissolved pending the election that was held June 9, 1977. The chairman and ten of the 12 Committee members returned as members of the new legislature, and the Committee was reconstituted to allow it to complete this report.

The Committee recognized early in its work that it was beyond the scope of its task to seek to effect a significant improvement in the accident rate by reducing the time Ontarians spend on the road. Ontario motor vehicles travel some 40 billion miles each year. The motor vehicle in its various forms - car, truck, bus, motorcycle - is an integral part of North American life. For example:

- § The rural school system has been built around fewer, larger schools partly because the school bus made the one-room local school obsolete
- § The workplace has become increasingly distant from housing and the private automobile has replaced local transit and the commuter train as the favoured means of travelling between home and job
- § The trend to dispersal of industry from downtown areas has been given further impetus by the growth of trucking, which is the fastest growing means of transporting goods in Ontario

- § More and more, shopping and recreation are concentrated in large complexes that offer convenient parking space for thousands of cars.

Canadians have come to depend in particular on the private car, to the point that nearly all adults in Ontario are licensed to drive. Few of us walk to work or play even when we could easily do so. It would clearly be unrealistic to propose solutions to the problems of road safety that would run counter to the apparent needs and preferences of the majority of Ontarians.

The Committee recognizes as well that death and injury rates on the Province's roads, while high, have shown a downward trend in recent years, in response to safety efforts already undertaken. In 1976, there were fewer traffic deaths than in any other year during the past decade. Most other commonly used safety indicators show an improving trend. Thus sharp reductions will be more difficult to achieve than would be the case if no new safety measures had recently been taken. For example, the introduction on January 1, 1976 of lower speed limits and the law making the use of seat belts mandatory was followed by a drop of more than 16% in the annual toll of road deaths. But more can be done to make existing road safety measures effective. The Committee believes that fresh, new road safety efforts can and must be made in Ontario. It is of the view that measures must be found that will provide the public with still greater protection against both human fallibility and mechanical failure. Its findings and recommendations to this end are accordingly organized in this final report in sections on:

- § The driver: training, testing and licensing, impaired driving, the system for enforcing the driving laws
- § Motor vehicles: the automobile, the school bus, the truck
- § The road
- § The administrative and research requirement of the Province's road safety program.

These sections are summarized below.

SUMMARY OF SECTION II

DRIVER TRAINING

Formal driver training is offered in Ontario through public high schools as well as a private commercial industry and enjoys wide public support. The belief is that it educates the new driver, who is involved in accidents at twice the rate of experienced drivers, to perform more effectively on the road than casual instruction from family or friends, and can reduce the incidence of driver error, which is listed as the major cause of up to 90% of reported accidents.

The Committee found, however, that driver training does not live up to its promise: all careful studies have shown that it is, at best, of questionable value in reducing accidents and fatalities. It seems that new drivers with similar backgrounds have much the same driving records whether they take driver training or not.

The Committee therefore addressed itself to ways of improving the safety value of driver training in both high schools and driving schools, and to the need for more training for motorcycle drivers.

MAXIMIZING THE IMPACT OF THE HIGH SCHOOL DRIVER TRAINING CURRICULUM

Every school board in Ontario accepts driver training as a legitimate high school program, and it is offered by approximately 570 secondary schools. In the 1975-1976 school year, more than 44,000 students - or nearly 15% of applicants for driver's licences - completed such courses.

The Committee was concerned to establish whether young drivers who have received high school driver training in fact have better crash records than do the same types of young drivers who are trained elsewhere. It found that most experts hold it is likely that current driver education courses are largely ineffective in reducing subsequent accident involvement.

The Committee has taken the position that effective programs of high school driver training should form an integral part of a comprehensive approach to road safety. The question, as L.P. Lonero of the Ministry of Transportation and Communications (MTC) succinctly put it, is how to "change the programs in order to maximize their impact, to make sure that they work as well as they possibly can".

The entire provincial approach was criticized by Mr. C. O'Hearn, the course director for the Ontario Safety League, who said it "lacks credibility . . . The effort is there, it intends to be good, but it is really Mickey Mouse".

The Committee found three major weaknesses of high school driver training in Ontario:

1. The high school course content is not sufficiently safety-oriented
2. Both the supply of teachers and their training are inadequate
3. The success of the program has never been evaluated.

Accordingly, the Committee recommends that:

- II-1: THE GOVERNMENT OF ONTARIO SHOULD
ACCEPT THE RESPONSIBILITY FOR
DEVELOPING AND EVALUATING A DRIVER
TRAINING PROGRAM FOR ONTARIO THAT
MEETS SPECIFIC SAFETY OBJECTIVES.

IMPROVING THE QUALITY OF COMMERCIAL DRIVING SCHOOLS

The size of the commercial driving school industry in Ontario is difficult to determine. About all that is known is that at the beginning of 1977 there were approximately 400 commercial driving schools in Ontario and that in 1976, 536 new licences and 1,979 renewals were issued to commercial driving school instructors.

The Committee heard a great deal about the need for specific public regulation of the industry in Ontario, and it gave serious consideration to this question. The demand for regulation is impressive. The Committee has decided, however, that it would be more productive to ensure an appropriate agency is designated to enforce current legislation and to concentrate on improving the overall quality of driving instructors.

Accordingly, the Committee recommends that:

- II-2: THE GOVERNMENT OF ONTARIO SHOULD CLEARLY AND PUBLICLY DESIGNATE THE MINISTRY OF CONSUMER AND COMMERCIAL RELATIONS AS THE APPROPRIATE AGENCY FOR THE STRICT AND ACTIVE ENFORCEMENT OF ALL RELEVANT CONSUMER PROTECTION LEGISLATION.

The Committee is of the view that commercial driving instructors must be adequately screened to ensure that they are capable of providing the best service possible. The Ministry of Transportation and Communications advised the Committee that it is in the process of putting forward a "very much more demanding" program for licensing of commercial driving school instructors. The Committee supports this initiative.

Accordingly, the Committee recommends that:

- II-3: THE GOVERNMENT OF ONTARIO SHOULD DEVELOP AND IMPLEMENT A NEW SET OF STANDARDS FOR A NEW CLASS OF DRIVING INSTRUCTOR'S CERTIFICATE, REQUIRING FAR GREATER KNOWLEDGE AND TEACHING SKILL THAN THE CURRENT PERMIT.

The Committee is also of the view that the training required of driving instructors must be upgraded significantly, and must be structured to emphasize the "professionalism" of the vocation. In addition, programs to train potential instructors should be available in as many areas of the Province as is practicable.

Accordingly, the Committee recommends that:

- II-4: THE GOVERNMENT OF ONTARIO SHOULD ENCOURAGE COMMUNITY COLLEGES TO OFFER A DRIVING INSTRUCTION PROGRAM THAT WILL OFFER TRAINING TO THE STANDARD OF THE NEW CERTIFICATE.

ENSURING THAT MOTORCYCLISTS HAVE ADEQUATE SKILLS

Between 1970 and 1975, the number of motorcycle drivers and passengers killed and injured each year steadily increased. The fatality rate for motorcycle drivers in 1975 was 56.4 per 100,000 - over four times the rate for all motor vehicle drivers. The fatality rate for motorcycle drivers in 1976 was lower - 42.8 per 100,000 drivers - but still nearly four times the rate for all motor vehicle drivers.

The Canada Safety Council recognized the special problem of the motorcyclist some years ago, and designed a motorcycle training course that is available in Ontario through the Ontario Safety League and provincial and local motorcycle associations. The Committee believes that the Council's course offers real benefits to new motorcyclists, and was impressed by its wide availability.

Accordingly, the Committee recommends that:

- II-5: THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD URGE ALL NEW MOTORCYCLE DRIVERS TO TAKE THE CANADA SAFETY COUNCIL MOTORCYCLE TRAINING COURSE, AND SHOULD ENCOURAGE ITS SPREAD TO CENTRES NOT NOW BEING SERVED.

SUMMARY OF SECTION III

TESTING AND LICENSING

Testing and licensing appear to offer enormous potential for promoting the highest driving standards, but unfortunately much of the apparent potential of this process is illusory. No reliable, fair method has been devised to screen out the "problem" driver. It is the erratic or inattentive behaviour of the average "safe" driver that causes most accidents. All of us are the problem. Furthermore, the desire to drive, to be mobile, is so compelling in our society that denial of a licence often fails to stop people from driving.

These caveats are not meant to suggest that testing and licensing perform no useful function in road safety. If reasonable standards are set and maintained, a high degree of voluntary compliance will follow. In this section of the report, the Committee discusses and makes recommendations about: the test for a first licence; the use of demerit points to identify problem drivers for corrective action; the development of a special licence for new drivers; and the problems of licensing drivers with physical disabilities.

THE FIRST LICENCE: GAINING THE RIGHT TO SOLO

The examination given 300,000 applicants for a first licence each year in Ontario is generally as comprehensive and complete as those of other North American jurisdictions. The failure rate of about 33% (most failures are on the practical section of the test) is also comparable to those of most other jurisdictions. Three reasons have been given for making it more difficult to pass the test.

1. To set a higher standard for driver skills. This is an acknowledged objective of the Ontario test. MTC has gradually raised the driving test standard. It does not pretend, however, that its test sets a very high standard. But until the capacity and acknowledged effectiveness of driver training is substantially improved, there is no justification for setting an even higher standard for driver skills.

2. To screen licence applicants to eliminate incompetent or probable accident-causing drivers. The Ontario test has this effect in that about one applicant in three fails. MTC abandoned the retesting of drivers whose licences had been suspended for impaired driving on discovering that their failure rate was negligible (about 0.5%). It has considerable support for its position that making the test significantly more difficult would have little safety value.

3. To provide the new driver with a diagnosis of driving faults as a guide for remedial action. This takes place in Ontario as elsewhere in that the examiner points out the applicant's errors, but there is no specific follow-up in the form of a remedial program of instruction; the applicant returns and tries again. The Committee found no jurisdiction that had organized itself to provide a remedial instruction program.

Overall, the Committee found that Ontario's driving test met the "best industry practice" standard. For the future, MTC is developing an off-street testing track that will enable it to test car-handling skills more efficiently and effectively.

USING DEMERIT POINTS TO MAINTAIN AN ACCEPTABLE STANDARD

The licence is automatically renewable for most drivers who have passed the driving test in Ontario. The Committee found no jurisdiction where driving skills are routinely retested, and concluded that the inconvenience and expense of such a program could not be justified.

Ontario maintains some control of the licensed driver through the demerit point system (Exhibit III-1). However, this system has two features that can be used to undermine its goals. Points for any offence are retained for only two years and then dropped, and the date on which the points are recorded is the date of the conviction in court, not the date on which the offence took place. Drivers charged with an offence that would result in their acquiring 15 points within a two-year period, if found guilty, and thus incurring a licence suspension, often delay the date of their appearance in court until points for an earlier conviction are dropped, and thereby avert a suspension.

Accordingly, the Committee recommends that:

III-1: THE GOVERNMENT OF ONTARIO SHOULD
AMEND THE HIGHWAY TRAFFIC ACT SO
THAT A DRIVER WHO IS FOUND GUILTY
OF AN OFFENCE WILL ACCUMULATE
DEMERIT POINTS FROM THE DATE ON
WHICH THE OFFENCE TOOK PLACE.

Another reason for the ineffectiveness of the suspension is the apparent ease and frequency with which it can be ignored. Police advised the Committee that their task of identifying drivers operating vehicles without a valid licence would be easier if a photograph of the driver were attached to the licence. This would prevent the borrowing of licences.

* - The exhibits for each section appear at the end of this section in the full text of the report.

Accordingly, the Committee recommends that:

- III-2: THE GOVERNMENT OF ONTARIO SHOULD PROCEED WITH ITS PREVIOUSLY ANNOUNCED PROGRAM OF HAVING THE LICENCEE'S PHOTOGRAPH IMPRINTED ON THE DRIVING LICENCE.

TAKING EARLY
STEPS TO HELP
YOUNG DRIVERS

The greatest concern of the Committee is the overwhelming evidence of driving problems among young and inexperienced drivers who constitute the vast majority of new licencees. A disproportionately high number of young people are killed and injured in traffic accidents. Drivers have a very high involvement in traffic collisions in their first five years of driving (Exhibit III-2), and the youngest new drivers have the worst record. Teenage drivers' conviction rates are also very high (Exhibit III-3), indicating that inexperienced young drivers are getting into accidents because of irresponsible driving.

Suggestions offered for dealing with the young new driver include an increase in the driving age, a licence restricting hours of driving and a probationary licence system. The Committee considers the first suggestion impractical and the second unenforceable.

The Committee found merit in the concept of a probationary licence system that would make it possible to identify "problem" drivers early and intervene promptly. A driver-improvement course can be useful if it is directed at the proper group. Further, the Committee has concluded that a licence suspension is an effective deterrent for some people-even if others manage to ignore it.

Accordingly, the Committee recommends that:

- III-3: THE GOVERNMENT OF ONTARIO SHOULD DEVELOP AND IMPLEMENT A TWO-YEAR PROBATIONARY LICENCE FOR DRIVERS RECEIVING THEIR FIRST LICENCE THAT WOULD HAVE THE FOLLOWING FEATURES:

- (1) A WARNING LETTER ISSUED AT THREE
DEMERIT POINTS
- (2) A PERSONAL INTERVIEW CONDUCTED AT
SIX POINTS
- (3) A DRIVER-IMPROVEMENT COURSE
REQUIRED AT NINE POINTS
- (4) A THREE-MONTH SUSPENSION APPLIED
AT 12 POINTS
- (5) AT THE DISCRETION OF THE COURT,
ADDITION OF A YEAR TO THE PROBATIONARY
PERIOD IF THE DRIVER GIVES CONTINUOUS
EVIDENCE OF IRRESPONSIBLE BEHAVIOUR.

COPING WITH PHYSICAL DISABILITIES

The Committee found grounds for concern in the looseness of the checking for physical disability and the inflexibility of the licensing system.

Unfortunately, the retesting provisions do not work as smoothly as they should. The vast majority of drivers are never retested until age 80. And a major problem lies in the physician's unwillingness to volunteer a report about a patient, possibly breaching doctor-patient confidentiality and losing the patient. The result is that drivers with medical disabilities are not all identified to the licensing authorities, and many continue to drive.

Accordingly, the Committee recommends that:

- III-4: THE GOVERNMENT OF ONTARIO SHOULD
REQUIRE THAT EVERY LICENSED DRIVER
SUBMIT A FORM COMPLETED BY A

PHYSICIAN CERTIFYING THAT, TO THE BEST OF THE PHYSICIAN'S KNOWLEDGE, THE DRIVER DOES NOT SUFFER FROM ANY OF THE SPECIFIED MEDICAL LIMITATIONS, AT EACH LICENCE RENEWAL FOLLOWING THE DRIVER'S 50TH BIRTHDAY.

A particular physical problem is deteriorating eyesight. An eye examination is not routinely required in Ontario for the renewal of an automobile driving licence until age 80. The Committee was told that eyesight begins to deteriorate significantly at about age 70.

Accordingly, the Committee recommends that:

- III-5: THE GOVERNMENT OF ONTARIO SHOULD REQUIRE THAT AN EYE EXAMINATION BE ROUTINELY REQUIRED AT EACH LICENCE RENEWAL AFTER THE APPLICANT'S 70TH BIRTHDAY.

In Ontario, obtaining a driver's licence is an all-or-nothing proposition: the applicant either meets all the standards and gets a full licence, or fails to qualify for any licence whatsoever. This approach to licensing is particularly hard on older people, who are likelier to comply with a restricted licence than young drivers.

The Committee believes that a restricted licensing system dealing with physically limited drivers, such as the elderly, will work effectively if it is made flexible to take into account the particular nature of their physical limitations.

Accordingly, the Committee recommends that:

- III-6: THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD BE GIVEN THE DISCRETION TO ISSUE AN APPROPRIATELY RESTRICTED LICENCE TO PERSONS WHO FOR PHYSICAL OR MEDICAL REASONS CAN DRIVE SAFELY ONLY ON A LIMITED BASIS.

SUMMARY OF SECTION IV

THE IMPAIRED DRIVER

The combination of alcohol and driving constitutes the most serious problem in road safety. In Ontario in 1975, alcohol was involved in:

- 12% of property damage accidents
- 19% of all non-fatal injury accidents
- 26.5% of all fatal accidents, and
- 51.8% of all driver deaths in accidents (Exhibit IV-1).

However, serious as they are, the road safety problems caused by alcohol represent a small part of the much larger societal problem with alcohol (Exhibit IV-2). The alcohol factor in road safety will never be eradicated as long as the larger societal problem is so pervasive. Improvements will only be found in integrated, multi-faceted, persistent approaches.

To date, the central strategy for controlling drinking and driving has been to deter potential offenders by facilitating the laying of charges, increasing the certainty of conviction and making the penalties more severe. Canada has adopted "Breathalyzer laws" empowering police to use the machines to facilitate the laying of charges, increased the maximum penalties for impaired driving, and given the police authority to use portable roadside screening devices to aid in the apprehension of impaired drivers. The main rationale is the belief that drivers are less likely to drive while impaired if they are convinced that they have a good chance of being caught and, if caught, of facing a certain and severe penalty.

The Committee found the result of increased apprehension and severe penalties to be similar in each jurisdiction it visited. There is an immediate, positive impact: alcohol-related collisions decline. But this is followed - sooner or later - by a return to the previous trends. Thus there is a constant need to develop fresh approaches and to reinforce old approaches to drinking and driving.

The Committee recommends a three-pronged attack on the problem of drinking and driving: prevention, management and rehabilitation.

**PREVENTION:
REDUCING THE SIZE
OF THE PROBLEM**

The level of apprehension in Ontario is quite similar to that in other provinces. In 1976, police in Ontario charged about 50,000 drivers - about 1.2% of all licenced drivers - with drinking and driving. However, relatively few impaired drivers are being apprehended. A roadside survey conducted by Statistics Canada revealed that on Thursday, Friday and Saturday evenings about 6.4% of all drivers on the road were legally impaired.

Some way must be found to persuade a significant proportion of potential offenders to refrain from driving in an impaired condition. The Committee advocates two kinds of preventive approaches: providing more information to the public, and introducing new deterrents to teenage drinking and driving.

It is important that the Ontario public be aware of both the increased risk of accidents causing injury or death when driving while impaired and the consequences of being convicted under the drinking-driving laws. The efforts made by government in this area are not sufficient to overcome the appeal of advertising portraying alcohol as a desirable and necessary part of the "good life".

Accordingly, the Committee recommends that:

- IV-1: THE GOVERNMENT OF ONTARIO SHOULD
INSTRUCT THE LIQUOR LICENCE BOARD
OF ONTARIO TO DEVELOP AND APPLY
NEW RESTRICTIVE GUIDELINES ON
ADVERTISING PROMOTING ALCOHOL
TO FURTHER RESTRICT "LIFESTYLE"
ADVERTISING.

A particular area of concern to the Committee is the lack of public awareness of the impairment that can be caused by prescription drugs, alone or in conjunction with alcohol.

Accordingly, the Committee recommends that:

IV-2: THE GOVERNMENT OF ONTARIO SHOULD REQUIRE THAT ALL DRUGS THAT ARE KNOWN OR SUSPECTED TO CAUSE IMPAIRMENT - ALONE OR IN CONJUNCTION WITH ALCOHOL - BE CLEARLY LABELLED WITH AN APPROPRIATE WARNING BY THE DISPENSING PHARMACIST.

Young, new drivers figure disproportionately not only in the overall accident statistics but increasingly in alcohol-related accidents as well. After the legal drinking age (and age of majority) was lowered from 21 to 18 in 1971, teenage involvement in drinking and driving accidents increased dramatically (Exhibit IV-3). By 1975, teenage drinking drivers were involved in a staggering 37.2% of alcohol-related collisions, and their involvement was still rising.

The Committee learned that alcohol seems to affect the teenager to a greater extent than older people. Even relatively small amounts of alcohol noticeably increase the accident vulnerability of the teenage driver (Exhibit IV-4). Research has shown that 18 and 19-year-olds are 70 times more likely to die in collisions than the average non-impaired Ontario driver, and with 16 and 17-year-olds, the risk of collision is 165 times greater than for the average, non-impaired Ontario driver.

The Committee also found that lowering the legal drinking age to 18 increased the use of alcohol among all teenagers. Prior to 1971, most 18 to 20-year olds (over 80%) already drank at least sometimes. Since the lowering of the drinking age, many more teenagers are drinking, and they are beginning to do so at a younger age (Exhibit IV-5).

There are many compelling reasons for lowering the age of majority and the legal drinking age in tandem. It is now clear, however, that the cost of this decision in terms of road safety has been excessive. Steps must be taken to reduce access to alcohol for the youngest drivers.

Accordingly, the Committee recommends that:

- IV-3: THE GOVERNMENT OF ONTARIO SHOULD
RAISE THE LEGAL DRINKING AGE TO 19*.

The Committee also believes that specific action should be taken simultaneously against the particular problem of under-age drinking and driving. Teenagers who drink while under the legal drinking age and then drive are exhibiting the kind of irresponsible behaviour that the probationary licence recommended by the Committee is intended to deter.

Accordingly, the Committee recommends that:

- IV-4: THE GOVERNMENT OF ONTARIO SHOULD
IMPOSE A THREE-MONTH LICENCE SUS-
PENSION AND CONCURRENTLY EXTEND
THE PERIOD OF THE PROBATIONARY
LICENCE FOR ONE YEAR OF ANY PRO-
BATIONARY LICENCE HOLDER CONVICTED
OF DRINKING WHILE UNDER THE LEGAL
DRINKING AGE, IF THAT PERSON WAS
DRIVING WHEN APPREHENDED FOR
UNDER-AGE DRINKING.

MANAGING THE DRINKING-DRIVING PROBLEM

While the preventive measures will, when implemented, deter some drivers from combining drinking and driving, police apprehension of drinking drivers must be upgraded and appropriate legal sanctions must be applied to those who continue to endanger public safety on Ontario roads.

In its interim report, the Committee noted that Ontario's impaired driving penalties are as stringent as those in any jurisdiction. The Committee therefore focussed on the possibility of increasing the likelihood of apprehending the impaired driver. It reviewed the current legal limits of alcoholic consumption, differentiating between a legal limit and a safe limit, and recommended a measure to remove impaired drivers from the road.

* - A dissent by Mr. Mike Breagh (Oshawa) from Recommendation IV-3 appears on page IV-15 of this report.

A particular concern of the Committee was the amount of alcohol in the blood that should constitute legal impairment. Currently, it is illegal to operate a motor vehicle in Ontario if the concentration of alcohol in the bloodstream exceeds 80 milligrams per 100 millilitres of blood. This means that 80 milligrams is legal; the penalty is applied above 80 milligrams. For technical reasons, the level at which charges are laid in practice is 100 milligrams of alcohol in 100 millilitres of blood.

The problem of setting a legal standard is that there is no "safe" limit. Even one drink will cause some impairment. Our roads would be safer if people did not exceed the "safe" limit. The Committee sought a new approach for Ontario that would reduce driving by persons who had exceeded the "safe" limit but did not require the imposition of all the legal processes and sanctions that must be invoked when the "legal" limit is exceeded.

The Committee found an attractive approach in the 24-hour licence suspension system used in Alberta and British Columbia. The main feature of their system is that police are empowered to suspend for 24 hours the licence of a driver who, in the opinion of the officer at the scene, is not capable of driving safely.

There are problems with the 24-hour suspension. For the driver on the borderline of legal impairment, it may weaken the deterrent effect of Criminal Code sanctions. In any event, as many as 50% of persons on 24-hour suspension will continue to drive. In addition, it may encourage inefficient or lazy police simply to suspend a licence rather than to lay a charge under the Criminal Code when appropriate, further weakening the deterrent effect of current sanctions. Also, this approach could make possible arbitrary and capricious suspension by police.

Recently, a portable blood alcohol testing device has become available - the small, battery-operated ALERT unit - that can be used by police at the roadside. Its use overcomes many of the problems with the 24-hour suspension.

Accordingly, the Committee recommends that:

- IV-5 THE GOVERNMENT OF ONTARIO SHOULD ENACT LEGISLATION TO EMPOWER THE POLICE TO SUSPEND FOR 24 HOURS THE LICENCE OF A DRIVER WITH A BLOOD ALCOHOL LEVEL OF 50 TO 100 MILLIGRAMS OF ALCOHOL PER 100 MILLILITRES OF BLOOD AS MEASURED ON AN "ALERT" MACHINE. FURTHER, THE ONTARIO PROVINCIAL POLICE SHOULD BE EQUIPPED AND DIRECTED TO ENFORCE THIS NEW LEGISLATION.

REHABILITATION: TAKING
EFFECTIVE ACTION WITH
CONVICTED OFFENDERS

The Committee was concerned that convicted offenders be dealt with as effectively as possible to minimize the chance that they will become repeat offenders. Three important findings have emerged from the extensive and sophisticated work of the federally funded Alcohol Safety Action Projects (ASAPs) in the United States with drivers convicted of driving while impaired (DWI).

1. Punishment is an ineffective method of dealing with the majority of offenders. One-half to two-thirds of convicted offenders in the ASAP programs are "problem drinkers" or alcoholics who, in most cases, have little control over their drinking. Only social drinkers, constituting about one-third of all DWI offenders, are deterred by the prospect of a fine, licence suspension or jail sentence from driving in an impaired condition.

2. Rehabilitation can reduce the incidence of repeat offences and/or alcohol-related collisions, but the methods used with each group must be different. Social drinkers respond to an educative approach that stresses the potential consequences of driving while impaired. Problem drinkers respond to extended personalized therapy.

3. Reasonably reliable assessments to identify the problem drinkers can be made in about 20 minutes. In the ASAP demonstrations, assessments were made after conviction but before sentencing to stream offenders into the most productive rehabilitative system.

The Committee believes that Ontario should take advantage of these findings. Society will benefit not only in terms of greater road safety but also in a reduction of the human and financial drain of alcoholism.

Accordingly, the Committee recommends that:

IV-6: THE GOVERNMENT OF ONTARIO SHOULD ESTABLISH A COMPREHENSIVE PROGRAM FOR DEALING WITH OFFENDERS CONVICTED UNDER THE DRINKING AND DRIVING SECTION OF THE CRIMINAL CODE. THIS PROGRAM WOULD HAVE THE FOLLOWING COMPONENTS:

- (1) A PRE-SENTENCE INVESTIGATION OF CONVICTED OFFENDERS TO GUIDE IN RENDERING THE MOST APPROPRIATE SENTENCE
- (2) A COMPULSORY EDUCATIONAL PROGRAM FOR ALL CONVICTED OFFENDERS ASSESSED TO HAVE CONTROL OF THEIR DRINKING BEHAVIOUR
- (3) A SET OF COMPULSORY TREATMENT ALTERNATIVES TAILORED TO THE NEEDS OF CONVICTED OFFENDERS ASSESSED TO LACK CONTROL OF THEIR DRINKING BEHAVIOUR.

(Exhibit IV-6 shows how the new scheme recommended by the Committee replaces the current blunt approach with more selective, specifically targetted intervention.)

However, achievement of worthwhile results will require careful management, evaluation and appraisal.

Accordingly, the Committee recommends that:

IV-7: THE GOVERNMENT OF ONTARIO SHOULD ENSURE THAT IN IMPLEMENTING THE NEW PROGRAM FOR OFFENDERS CONVICTED OF DRINKING-DRIVING OFFENCES, ADEQUATE ATTENTION AND FUNDING IS DEVOTED TO CONTINUOUS EVALUATION AND REAPPRAISAL OF ALL ASPECTS OF THE PROGRAM.

SUMMARY OF SECTION V

THE ENFORCEMENT SYSTEM

The Committee often heard from the public that the most effective road safety measure would be "more enforcement of our current laws". It was apparent that the public meant apprehension by the police of more traffic violators. The Committee learned that the system for the enforcement of traffic law is far more complex than it may at first appear and its effectiveness as a road safety measure is largely unknown.

The overall traffic law enforcement system comprises four separate but interactive components:

1. The laws and regulations governing driver behaviour on the roads are the foundation of the system.
2. The sanctions or penalties applied against violators are intended to deter drivers from breaking the laws and to discourage the recurrence of illegal behaviour.
3. The police have the most visible and vital function in the system - to manipulate drivers' behaviour so that they drive safely.
4. The function of the courts is to interpret the legislation, assess the evidence presented, determine guilt or innocence, and impose the appropriate sanction within the limits defined by the legislation.

Ideally, each component of the traffic law enforcement system builds upon the others, and is in turn dependent upon them to improve road safety. The corollary, however, is equally valid. Each part of the system can reduce the effectiveness of the others; each part can operate in a way that does not contribute to road safety.

The first two parts of this section of the report concentrate on the two components of the system where the Committee believes action should be taken: the police, who should make road safety a more explicit part of their activity, and the courts, where the adjudicative process should be improved. The third part considers the interaction of the components and the need for coordination.

INCREASING POLICE EFFECTIVENESS

The Committee believes that the police can be more effective in improving traffic safety. But the Committee makes its recommendations in this area in full recognition of the many demands that society places on the police. Ontario is fortunate to have such excellent police forces at both the provincial and municipal levels.

Since apprehension of violators is the traditional function of the police in enforcing the traffic laws, this is regarded by most people as their main contribution to road safety. However, apprehending violators is an effective safety measure only if the violations are likely to contribute to accidents. In fact, if the police were to accept that their primary road safety function is manipulating the behaviour of drivers to make them act in a safer manner, there would, very likely, be fewer convictions but fewer accidents as well. To manipulate driver behaviour effectively, the police must, in addition to apprehending violators, be a visible presence on the road, focussing their efforts on selected accident-prone locations.

Policing the roads in Ontario can be improved by: achieving maximum benefit from selective enforcement; ensuring that the police are properly equipped; allowing the use of remote surveillance equipment; and reducing the ability of motorists to evade the police.

The Ontario Provincial Police (OPP) endorse the concept of selective enforcement to put scarce resources to best use. However, the OPP may not be putting selective enforcement into practice as effectively as possible. Several facts led the Committee to this concern: their lack of information on high-risk violations; the relative infrequency of spot checks on weekend evenings, the worst time for drinking and driving; and the low priority given to equipping the police to enforce the impaired driving laws.

Accordingly, the Committee recommends that:

- V-1: THE GOVERNMENT OF ONTARIO SHOULD CAREFULLY EVALUATE THE ENFORCEMENT POLICIES AND PRACTICES AIMED AT ROAD SAFETY NOW BEING USED BY POLICE FORCES IN ONTARIO WITH A VIEW TO ENCOURAGING THE INTRODUCTION OF A MORE RIGOROUS SELECTIVE ENFORCEMENT PROGRAM AT THE EARLIEST POSSIBLE DATE.

The Committee is further concerned that the OPP require a minimum of 100 additional BreathAlyzers, and are making little or no effort to utilize the ALERT device. For the laws to be respected, the police must enforce them properly. In addition, the ALERT device is required to enforce the Committee's proposed 24-hour licence suspension.

Accordingly, the Committee recommends that:

- V-2: THE GOVERNMENT OF ONTARIO SHOULD ENSURE THAT ALL OPP DETACHMENTS ARE PROPERLY EQUIPPED TO ENFORCE CURRENT LAWS AND, IN PARTICULAR, THAT EACH DETACHMENT BE EQUIPPED WITH A BREATHALYZER.

An enforcement approach that supplements police manpower and has proved successful in Europe is a remote, automatic recording device that takes a picture of the rear of a speeding vehicle and its licence plate, enabling police to send the owner a citation for the offence. The presence of the camera is a deterrent to speeding and accidents are significantly reduced.

Using the remote surveillance devices in Ontario would require a change in the legislation. Police must be able to "ticket" the owner rather than the driver of the vehicle. A rebuttable presumption of guilt would be imposed on the driver.

Accordingly, the Committee recommends that:

- V-3: THE GOVERNMENT OF ONTARIO SHOULD INSTALL REMOTE, RADAR-CONTROLLED, SPEED-MEASURING CAMERAS AND "DUMMY" CAMERAS ON DANGEROUS STRETCHES OF ROAD.
- V-4: THE GOVERNMENT OF ONTARIO SHOULD ENACT LEGISLATION ALLOWING THE REGISTERED OWNER OF A VEHICLE TO BE "TICKETED" FOR SPECIFIED OFFENCES WHEN IDENTIFIED BY THE HIGHLY VISIBLE REMOTE CAMERAS*.

* - A dissent by Mr. Mike Breough (Oshawa) from Recommendation V-4 appears on page V-13 of the report.

The Committee is concerned that radar detection devices such as "fuzz busters" allow drivers to ignore speed limits by allowing them to slow down in time to avoid apprehension. These devices foster disrespect of the law and encourage driver behaviour that increases the risk of serious accidents.

Accordingly, the Committee recommends that:

- V-5: THE GOVERNMENT OF ONTARIO SHOULD ENACT LEGISLATION AT THE EARLIEST POSSIBLE MOMENT TO BAN THE SALE AND THE INSTALLATION AND USE OF ALL RADAR DETECTION DEVICES IN ALL MOTOR VEHICLES.

IMPROVING THE ADJUDICATIVE PROCESS

In terms of workload and administrative burden, traffic and parking offences are a far greater factor in the overload on the court system in Ontario than serious criminal offences. To improve the court situation, the Government is taking a general approach of "decriminalizing" minor offences to deal with them more informally and therefore more quickly and cheaply. The North York Traffic Tribunal, which has the basic aim of removing minor traffic offences from the standard court system, is an important step.

Accordingly, the Committee recommends that:

- V-6: THE GOVERNMENT OF ONTARIO SHOULD BUILD ON THE TRAFFIC TRIBUNAL CONCEPT BY:
- CAREFULLY EVALUATING AND MONITORING THE CONTINUING RESULTS OF THE NORTH YORK TRAFFIC TRIBUNAL
 - BREAKING DOWN THE COMPONENTS OF THE NORTH YORK SYSTEM TO DETERMINE THE EFFECT OF EACH PART
 - SPREADING THE TRIBUNAL SYSTEM ACROSS THE PROVINCE BASED ON THE INFORMATION GATHERED IN NORTH YORK.

It is essential that the effect of the penalties for minor traffic violations is not lost in the process of alleviating the burden on the courts and the police. The Committee therefore endorses in principle two proposals recently advanced by the provincial Attorney General. He indicated that legislation may be introduced that would prevent drivers with unpaid traffic fines from either renewing their driving licences or obtaining new car licence plates. As well, he suggested that licence plates stay with a car owner rather than follow the vehicle. Tying licence plates to the owner rather than the vehicle would make denial of registration even more effective.

COORDINATING THE TRAFFIC LAW ENFORCEMENT SYSTEM

For the traffic law enforcement system to be effective, it is essential that each of its components function as part of an inter-related whole. Yet the enforcement system in Ontario lacks overall management and systematic coordination. This lack of coordination lessened the impact of the recently introduced mandatory seat-belt usage law. Ontario's enforcement system can be made more effective through a system-wide management approach.

Accordingly, the Committee recommends that:

- V-7: THE GOVERNMENT OF ONTARIO SHOULD GIVE ONE OF THE ENFORCEMENT AGENCIES THE RESPONSIBILITY FOR COORDINATING THE TRAFFIC LAW ENFORCEMENT SYSTEM.

SUMMARY OF SECTION VI

THE AUTOMOBILE

A balanced approach to highway safety must include careful consideration of ways to improve the safety of the vehicles using the road, for at least three reasons. First, while the Committee had originally been led to believe that vehicular failures are responsible for only about 5% of accidents, they may play a part in a quarter of all accidents. Second, physical engineering can actually change the vehicle; social engineering can only try to influence people. And third, changes in vehicle design can minimize the personal and financial consequences of accidents, however they are caused.

Increased safety is attainable both for new vehicles and for those already in use. Vehicles can be improved so that they cause fewer accidents, so that they make it easier for drivers to avoid accidents and so that they minimize the consequences of the accidents that do occur. The thrust of vehicle-in-use programs is to reduce accidents by ensuring that vehicles are maintained at an acceptably high standard through checks of safety components such as brakes, steering and suspension.

The Committee discusses and makes recommendations for changes in three kinds of vehicles. This section focusses on passenger cars; the next two sections deal with school buses and heavy trucks.

MAKING NEW VEHICLES SAFER

Occupants of motor vehicles sustain injury and die in crashes during the "second collision", the contact of the driver or passenger with the interior of the vehicle, each other, or the area surrounding the collision. The basic approach to reducing death and injury is to spread out the impact and decrease the rate of deceleration of the second collision so that human injury thresholds are not exceeded. As shown in Exhibit VI-1, the human frame can decelerate from 70 mph to zero without injury in as short a distance as four feet - if properly protected.

Of all the improvements in vehicle equipment, the most significant appears to have been the development of protective restraint devices. These restraints are either "active", requiring activation by occupants of a vehicle, or "passive", operating automatically without requiring any action by the occupants. The first protective restraints - the lap seat belt and then the separate shoulder harness - were introduced into North American vehicles in the 1960s, followed in the 1970s by the three or four-point belt system. Most seat belts now installed in cars are active restraints, but passive belt systems have been developed that are automatically deployed around the shoulder and lap of the driver or passenger as they enter the vehicle and close the doors.

Studies have indicated that the three-point systems have the potential of reducing deaths or injuries by as much as 60%. The Government of Ontario believed that the evidence on the seat belt was sufficiently compelling to make their usage mandatory as of January 1, 1976. Since Ontario lowered speed limits at the same time, it is difficult to ascertain exactly the effect of the seat belt law. There were decreases in 1976 of 16.8% in fatal accidents, 16.1% in persons killed, 11.8% in non-fatal accidents and 13.7% in personal injuries. The improvement, while encouraging, is significantly less than the Committee believes can be achieved.

The disappointing figures point out the major drawback of most seat belts - they are active restraint systems, and must be activated, or put on - each time the driver or passenger enters the vehicle. In addition, the seat-belt law is not being vigorously enforced. MTC's surveys show that seat-belt usage increased from about 30% before passage of the law to nearly 80% shortly thereafter. Usage rates declined during the year to 65% and then to below 60%, marginally above the level before the legislation.

Accordingly, the Committee recommends that:

VI-1: THE ONTARIO POLICE SHOULD PLACE
GREATER EMPHASIS ON ENFORCING
CURRENT SEAT-BELT LEGISLATION.

The major future achievement in vehicle safety is expected to come from the design of more protective vehicle structures and less dangerous vehicle exteriors. As North American cars become uniformly smaller in the interest of conserving energy, these structural improvements will become increasingly important. It has been shown conclusively that small cars provide less protection than large cars in crashes (Exhibit VI-2).

The technology is also available to install a passive restraint system that would provide further interior protection and overcome the problem of public resistance to seat belts - the controversial air bag system. The new U.S. Secretary of Transportation, Brock Adams, recently announced amendments to the existing U.S. safety standards for occupant crash protection that would require provision of passive restraints against frontal crashes in all new cars sold in the U. S. by the 1984 model year. The decision envisaged that most cars would be equipped with air bags. Secretary Adams is of the view that the passive restraints will save 9,000 lives annually in the U. S.

The major force in bringing design improvements into the automobile market, and for ensuring that their potential is realized, is the regulatory authority of government. In Canada, the federal government has responsibility for issuing domestic vehicle safety standards. Canada has opportunities as well to have an impact on standards in other jurisdictions, and Ontario itself has a limited but significant role in the debates over North American standards. It can support a federal initiative, attempt to redirect it, or press the federal government to take a new initiative.

Since Ontario is the province with the largest stake - as manufacturer and consumer - in the Canadian automobile market, the Province has a particular responsibility to press for and support vehicle safety initiatives.

Accordingly, the Committee recommends that:

- VI-2: THE GOVERNMENT OF ONTARIO SHOULD TAKE AN ACTIVE PART IN SUPPORTING AND DIRECTING THE FEDERAL GOVERNMENT IN THE DEVELOPMENT OF STANDARDS FOR IMPROVING THE SAFETY OF AUTOMOBILES, AND IN PARTICULAR, SHOULD SUPPORT THE INTRODUCTION OF AMBER TURN SIGNALS ON ALL CARS SOLD IN CANADA AND THE EARLY INTRODUCTION OF WIDE, SMOOTH, RUBBER-COATED SAFETY BUMPERS ON ALL CARS SOLD IN NORTH AMERICA.

The U.S. decision on the air bag is important for both Canada and Ontario. If passive restraints become mandatory in the United States, all North American car buyers bear some part of the cost of their installation. The result could be pressure on the Province to repeal its seat-belt law and go solely with the passive American approach. The Committee believes that the air bag system is a worthwhile step forward in automobile safety, but for maximum safety benefits should be used in conjunction with, not in place of, the current lap and shoulder seat-belt system.

Accordingly, the Committee recommends that:

- VI-3: THE GOVERNMENT OF ONTARIO SHOULD URGE THE FEDERAL GOVERNMENT TO MAKE PASSIVE RESTRAINT SYSTEMS MANDATORY IN ALL NEW CARS SOLD IN CANADA, BUT IT SHOULD CONTINUE TO REQUIRE USAGE OF THE FULL THREE-POINT SEAT BELT IN ONTARIO TO MAXIMIZE THE EFFECTIVENESS OF AIR BAG SYSTEMS.

As well as playing a role in the North American system for improving the overall safety of automobiles, Ontario can have its own role in very particular areas. If certain safety equipment is offered as an option on virtually all cars sold in the Province, then it is possible for the Province to make the equipment mandatory. For example, the rear-window defroster will never be a North America-wide requirement because it is unnecessary in the southern United States, nor is it likely to be a Canadian standard, but it is very useful in Southern Ontario.

Accordingly, the Committee recommends that:

- VI-4: THE GOVERNMENT OF ONTARIO SHOULD INVESTIGATE ALL WIDELY AVAILABLE OPTIONS THAT ADD SAFETY VALUE TO THE VEHICLE AND MAKE THOSE MANDATORY THAT ARE OF PARTICULAR VALUE TO THE PROVINCE, AND SPECIFICALLY, SHOULD REQUIRE ALL NEW VEHICLES SOLD IN THE PROVINCE TO BE EQUIPPED WITH REAR-WINDOW DEFROSTERS.

MAINTAINING VEHICLES IN A SAFE CONDITION

While federal governments and manufacturers make a sustained effort to get safe, low-polluting, energy-efficient new cars on the road, it is the responsibility of the owner and provincial and municipal governments to ensure that vehicles on the road are kept in a safe condition. There are two important ways of doing this: by ensuring proper vehicle maintenance and repair; and by preventing the addition of unsafe components to the vehicle.

Many jurisdictions in North America and Europe have a system of mandatory periodic vehicle inspection (PMVI). The major rationale of PMVI is safety. A second benefit is that it helps vehicle owners by extending the life of the car, and a third is that it provides a regular system for ensuring that other equipment standards are maintained. The Ministry of the Environment in Ontario would welcome a PMVI system that gave it an opportunity to check out anti-pollution equipment.

Ontario has a PMVI program for automobiles, but on a selective basis. Rather than requiring that all vehicles be inspected at certain intervals, the Ontario program focusses on the vehicles that are considered likeliest to have defects - used vehicles being resold and vehicles coming into Ontario from other jurisdictions. This compulsory program is supported by a less rigorous spot-check system operated by MTC.

The Committee believes that Ontario should extend its PMVI system. It is recommending an extensive inspection of older and seriously damaged vehicles.

Accordingly, the Committee recommends that:

VI-5: THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD EXTEND ITS MOTOR VEHICLE INSPECTION SYSTEM THROUGH LICENSED STATIONS TO INCLUDE:

- ANNUAL INSPECTION OF CARS FIVE YEARS OLD OR OLDER
- INSPECTION OF EVERY CAR RECEIVING MORE THAN \$800 DAMAGE IN AN ACCIDENT.

MTC should evaluate the extended PMVI program very closely. It may be that the data will support the inspection of cars before they reach their sixth year. In any event, all motorists should be encouraged to keep their vehicles in good working order - whatever the age of their vehicles.

Accordingly, the Committee recommends that:

VI-6: THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD ENCOURAGE MOTOR VEHICLE OWNERS TO SEEK ANNUAL INSPECTION OF THEIR VEHICLES ON A VOLUNTARY BASIS.

The shock absorber standard needs revision. The shock absorbers hold the wheels on the road over uneven surfaces, and are critical in the safe operation of the vehicle. The present standard specifies that shock absorbers need only be attached at the top and bottom, and appear to be unbent in order to pass the safety test. In practice, they can be completely inoperative, yet pass.

Accordingly, the Committee recommends that:

- VI-7: THE GOVERNMENT OF ONTARIO SHOULD
CHANGE THE INSPECTION STANDARD FOR
SHOCK ABSORBERS TO SPECIFY "GOOD
WORKING ORDER".

The automotive after-market refers to the very extensive buying and selling of parts and components for cars after they leave the manufacturer. A car that initially meets all the federal safety standards could be almost totally rebuilt from after-market parts. The current controls over the after-market affect only the use of products - not their sale or installation. Vendors are free to sell, and individuals to buy, components that MTC has prohibited as unsafe or not yet assessed. Theoretically, the car owner is also free to install such components - but not to use them. The police have authority to lay a charge only if they are able to identify the components, when in use, as illegal.

Accordingly, the Committee recommends that:

- VI-8: THE GOVERNMENT OF ONTARIO SHOULD
BAN THE SALE AND THE INSTALLATION
AS WELL AS THE USE OF UNAPPROVED
AFTER-MARKET COMPONENTS.

SUMMARY OF SECTION VII

THE SCHOOL BUS

In Ontario, as throughout North America, the familiar yellow school bus has an excellent safety record. On a statistical basis,

the school bus is the safest vehicle on the road. School buses have fewer fatalities per mile driven than any other class of vehicle.

Despite this impressive record, many oral and written submissions to the Committee were directed towards improving the safety of school buses, and the Committee endorses this goal. Mr. J. Bates of the Ontario Federation of Home and School Associations spoke for all parents when he said that "our most precious cargo is our children". The safety record of school buses is far from perfect. Also, the number of school children travelling by bus has been growing (Exhibit VII-1), increasing the possibility of an accident occurring. Finally, the scale of prospective tragedy in a serious school bus accident is increasing as school buses, for economic reasons, become larger.

This section of the report sets out the kinds of improvements that could be made in school buses, outlines the problems in getting them introduced, and recommends a more active role for the Province in school bus safety.

IMPROVING SCHOOL BUS SAFETY

Some organizations advocated strengthening the standard of the vehicle structure to help reduce the incidence of accidents and to maintain its integrity when an accident occurs. Suggested improvements included the use of radial tires for improved traction and one-piece, full-length, side and roof panels to increase the strength of the bus frame.

Two approaches have been suggested to reduce fatalities and injuries from the "second collision" of school children with the inside of the bus: seat belts and padded safety seats. The latter appear to offer greater promise.

The Committee was also urged to recommend universal regulations for the operation of school buses. Suggested regulations would, for example, prohibit standees and three-to-a-seat sitting, and require a monitor on each bus to ensure that all children remain seated. It is clear that these measures would make school busing safer.

INTRODUCING SCHOOL
BUS SAFETY
FEATURES

To date, the Province has limited its role in school bus safety to working with the Canadian Standards Association (CSA) on the overall standard for school buses. Responsibility for making improvements over the base level set by the CSA and the Province lies with the individual school board. The Committee agrees with the present division of responsibility for school bus safety. It is deeply concerned, however, that the school boards are making critical safety decisions on the basis of very limited and incomplete information.

Accordingly, the Committee recommends that:

- VII-1: THE GOVERNMENT OF ONTARIO SHOULD
ACCEPT RESPONSIBILITY FOR GATHERING,
EVALUATING, AND DISSEMINATING INFOR-
MATION ON EQUIPMENT, SAFETY FEATURES
AND OPERATION OF SCHOOL BUSES.

The Committee is also concerned by a practice recently adopted by some school boards of contracting for private vehicles to carry small numbers of children to and from school or on school-sponsored trips. Vehicles used for this taxiing are not classified as school buses, and thus none of the specific regulations and standards for school bus safety apply to them.

Accordingly, the Committee recommends that:

- VII-2: THE GOVERNMENT OF ONTARIO SHOULD
REQUIRE THAT ALL VEHICLES UNDER
CONTRACT TO A SCHOOL BOARD AND USED
FOR THE TRANSPORTATION OF SCHOOL
CHILDREN BE GIVEN A SAFETY INSPECTION
BY A LICENSED MECHANIC EVERY SIX
MONTHS.

SUMMARY OF SECTION VIII

THE TRUCK

The truck is a major component of traffic in Ontario. The 534,855 trucks registered in the Province in 1974 constituted over 14% of vehicles on the road. Our society has come to depend on the truck as the primary carrier of goods to market, and this role is forecast to continue to grow in the 1980s.

The public perceives the truck as a menace to highway safety. The Committee was often urged to do something about the number, size and speed of trucks travelling on our highways. It concludes in this section that the public concern is not without foundation. It calls for an effort to improve the safety of the truck by: making truck safety a specific part of the regulatory machinery; setting specific safety standards; and, ensuring proper maintenance.

ESTABLISHING THE ROLE OF THE TRUCK IN HIGHWAY SAFETY

The Committee found that the information currently available on trucks within Ontario was insufficient to establish with certainty the safety record of trucks in the Province. MTC does not keep specific data on trucks by type and size. It defines the truck simply as a commercial vehicle. Available Ontario statistics do not indicate a disproportionate involvement of trucks in accidents in the Province, but U.S. figures suggest that the accident record of heavy trucks is cause for concern. Heavy trucks of over 20,000 pounds account for only .8% of all vehicles registered in the U.S., but are involved in 4.8% of all fatalities. Moreover, the large truck represents a hazard to other vehicles, because the occupants of the car are much more likely to be killed than those of the truck in a truck-car collision. Given the expected increase in the number of trucks on the road, the need to improve their safety record is all the more pressing.

Minimizing the hazard of the truck on the road is a complex task. The many different kinds of configuration of the truck include a single unit, a tractor and trailer, a tractor with semi-trailer and pup trailer, or a "double", and a tractor with semi-trailer and two pup trailers, or a "triple" (Exhibit VIII-1). Each configuration has different handling and loading characteristics, and therefore presents different safety problems.

The Highway Traffic Act contains numerous regulations for the commercial vehicle, but these provisions leave too much unregulated in terms of safety despite recent attempts by MTC to fill in the gaps. In addition, there are difficulties in enforcing the regulations that do exist.

One simple regulation that would have a safety impact and is easily enforceable is to require reflectorized material on the back of all vehicles. Since a new reflectorized licence plate is being introduced, additional reflectorization is required only on the larger vehicles, specifically those vehicles over 18,000 pounds that relate to Classes A, B, C and D of the classified driver licensing system.

Accordingly, the Committee recommends that:

VIII-1: THE GOVERNMENT OF ONTARIO SHOULD REQUIRE A WIDE BAND OF REFLECTORIZED MATERIAL ON THE REAR OF ALL VEHICLES OVER 18,000 POUNDS, OR THOSE THAT CORRESPOND TO CLASSES A, B, C AND D OF THE CLASSIFIED DRIVER LICENSING SYSTEM.

MAKING SAFETY A MORE EXPLICIT PART OF THE REGULATORY MACHINERY

Over the last decade, extensive research has been conducted to determine the measures that should be taken to create a safer truck, and the experts involved agree that far more specific regulations could be introduced. The Committee has concluded that the Province should make safety a more explicit part of the regulatory machinery, by drawing on the best trucking industry practice and focussing on the special problem posed by the "double".

Expert witnesses who appeared before the Committee were unanimous in their praise of the heavy trucking industry for putting into practice most of what is known about commercial vehicle safety. The Committee is concerned that too little of the trucking industry is influenced by the large operators' example.

The Committee believes that all owners and operators of trucks should have the benefit of higher safety standards, and those who have chosen to flout safe practice should not be allowed to continue to do so.

Accordingly, the Committee recommends that:

VIII-2: THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD WORK WITH THE TRUCKING INDUSTRY TO CODIFY A SET OF REGULATIONS FOR LOADING AND OPERATION OF ALL TRUCKS DRIVING IN ONTARIO THAT MEETS THE BEST INDUSTRY SAFETY STANDARDS.

When voicing objections to the "large" truck on the highways, the public usually referred specifically to the "double". Those who question the safety of the double have support from recent research studies emphasizing special problems. For example, pup trailers have been shown to have a natural tendency to oscillate, producing a tail-wagging motion in most high-speed operations (i.e., those over 45 mph) that can lead to jack-knifing in extreme situations. Other problems with the double combination involve manoeuvrability. For example, the mismatch in turning times for the tractor, semi-trailer and pup trailer may cause the trailer units to roll over, or swing out into oncoming traffic.

Accordingly, the Committee recommends that:

VIII-3: THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD ISSUE A SPECIAL LICENCE TO ALL OWNERS OF "DOUBLES", AND WORK WITH THE LICENSED OPERATORS TO ESTABLISH SUITABLE STANDARDS FOR THEIR MAINTENANCE, DRIVER CONTROL AND TRUCK LOADING PROCEDURES. IT SHOULD REVOKE THE LICENCE IF THESE STANDARDS ARE NOT MET.

SETTING SPECIFIC NEW TRUCK SAFETY STANDARDS

Specific areas of concern where the information available now is sufficient to identify realistic standards include brake standards, maximum length restrictions and the transportation of hazardous loads.

In 1975, the U.S. NHTSA ordered that all trucks of 20,000 pounds or over be equipped with a revised braking system. The agency's new "121" brake standard has both an anti-lock brake requirement and a reduced braking distance, about half the previous distance, and only 10% greater than that for the passenger car.

The federal government of Canada has not forbidden use of the new anti-lock brake as an optional component, but has refrained from adopting the overall 121 standard. The reliability of the anti-lock system has been questioned, and the federal government is awaiting the results of a performance study before making a final decision. The Committee found convincing evidence that the 121 system has a better performance record than the pre-1975 brake system. The hesitation of the federal government is no longer warranted.

Accordingly, the Committee recommends that:

VIII-4: THE GOVERNMENT OF ONTARIO SHOULD
URGE STRENUOUSLY THAT THE FEDERAL
GOVERNMENT ADOPT THE U.S. 121 BRAKE
STANDARD FOR TRUCKS.

The length limitation for commercial carriers in Ontario is 65 feet. After considering the safety issues relating to truck length, the Committee decided that the current 65-foot restriction is realistic.

Accordingly, the Committee recommends that:

VIII-5: THE MINISTRY OF TRANSPORTATION AND
COMMUNICATIONS SHOULD MAINTAIN THE
CURRENT 65-FOOT LENGTH LIMIT FOR
TRUCKS TRAVELLING ON ONTARIO ROADS.

The Highway Traffic Act gives Ontario the right to regulate the transportation of hazardous loads, but the only regulation the Province has put into effect in this area deals with the labelling of vehicles carrying such loads. The Committee found that the labelling system is considered to be seriously deficient in protecting the public.

The federal government has been working in this area for several years. Its goal is to develop a set of regulations for the transportation and labelling of dangerous loads for all modes of transportation across Canada as guidelines for a national system that it hopes the provinces will adopt. The federal guidelines would, of course, cover trucking operations. The Committee see no reason for further delay.

Accordingly, the Committee recommends that:

- VIII-6: THE GOVERNMENT OF ONTARIO SHOULD PRESS THE FEDERAL GOVERNMENT FOR EARLY INTRODUCTION OF NATIONAL REGULATIONS FOR THE TRANSPORTATION AND LABELLING OF HAZARDOUS LOADS. IF NATIONAL REGULATIONS ARE NOT FORTHCOMING WITHIN 12 MONTHS, THE GOVERNMENT OF ONTARIO SHOULD UNILATERALLY IMPLEMENT ITS OWN.

The last step in improving truck safety involves maintenance of the vehicle. It is essential that a monitoring process be introduced to ensure that truck operators comply with regulations - those in existence and those to be introduced - on an ongoing basis.

A mandatory inspection of dump trucks was instituted because of government concern over the safety record of these vehicles. Since the inception of this program, there has been a major decrease in dump truck mechanical defects, and the safety record of these trucks has improved significantly.

Accordingly, the Committee recommends that:

- VIII-7: THE GOVERNMENT OF ONTARIO SHOULD EXTEND THE DUMP TRUCK INSPECTION PROGRAM ON A PHASED BASIS TO ALL COMMERCIAL CARRIERS.

SUMMARY OF SECTION IX

THE ROAD

Earlier sections of this report dealt with two important factors in road safety: the driver and the vehicle. This section is concerned with the third, the road environment, which includes all of the physical factors associated with a road: the basic design and construction, the condition of the road surface, lighting and signs, and roadside objects.

This section discusses some of the improvements that can be made in road safety by making the road and its surrounding environment safer and by managing the flow of traffic effectively.

MAKING THE ROAD ENVIRONMENT SAFER

The overall goal of road design is to make the driving task simple and predictable, and to minimize damage if an accident occurs. Two approaches to making roads safer discussed in this part of the report are the improvement of "black spots" - the redesign of stretches of the road where accidents occur with undue frequency - and "roadside hazard modification" - the removal or reduction in the number of fixed inflexible roadside obstacles. In both of these areas, Ontario has well-developed programs.

While Ontario's black spot program essentially works well, the Committee found one problem that is a particular public concern - that of railway level crossings that do not have enough traffic to justify flashing lights or gates. Where a municipality finds such crossings dangerous, it should be allowed to erect a stop sign on the highway.

Accordingly, the Committee recommends that:

- IX-1: THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD AMEND ITS STANDARDS FOR THE LOCATION OF STOP SIGNS TO ALLOW THEIR ERECTION, AT THE REQUEST OF A MUNICIPALITY, AT RAILWAY LEVEL CROSSINGS.

The potential hazard of the unmarked crossings that are not marked by flashing lights is compounded by the difficulty of seeing a train as it proceeds through a crossing at night.

Accordingly, the Committee recommends that:

- IX-2: THE GOVERNMENT OF ONTARIO SHOULD URGE THE FEDERAL GOVERNMENT TO MAKE REFLECTORIZED MARKINGS MANDATORY ON THE SIDES OF ALL RAILCARS.

Accident data show that roadside hazards are a serious problem. In Ontario in 1975, there were 17,274 personal injury accidents and 480 deaths from single-vehicle accidents, where the vehicle usually collides with something on the roadside.

MTC has done extensive work on replacing or modifying roadside hazards with more flexible and energy absorbing devices. It has adopted a lightweight breakaway post for lighting and signage to replace the heavy fixed pole. A new "wrap-around pole" developed in Sweden bends around the vehicle on impact, rather than just breaking away. It could prove to be a significant advance.

Accordingly, the Committee recommends that:

- IX-3: THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD EVALUATE THE SAFETY POTENTIAL OF THE WRAP-AROUND POLE.

MANAGING THE FLOW OF TRAFFIC

Effective management of traffic, like good road design, minimizes the difficulty and hazard of the choices the driver must make. One important aspect of traffic management is setting appropriate speed limits, to maintain a consistent flow. Another is providing warnings of changes in weather conditions, a particular concern in a province where weather changes can be abrupt and severe.

In 1976, Ontario lowered speed limits on its freeways and highways. This move was dictated by safety as well as energy supply considerations. The police suggested to the Committee that since the new speed limits have been in effect, the overall speed on the highway has dropped. They also testified that the traffic flow is more even, with trucks and automobiles moving along at closer to the same speed. There is little doubt that the drop in the overall average speed, together with the mandatory seat belt law, contributed in a major way to the 16% saving in human lives last year.

Accordingly, the Committee recommends that:

- IX-4: THE GOVERNMENT OF ONTARIO SHOULD MAINTAIN THE LOWERED SPEED LIMITS EVEN IF ENERGY SUPPLY CONDITIONS EASE.

All of the problems associated with driving are complicated by poor weather. It would be helpful if drivers were warned in advance of conditions on the road ahead.

Accordingly, the Committee recommends that:

- IX-5: THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD INVESTIGATE THE FEASIBILITY OF INTRODUCING A "CONDITIONS AHEAD" WEATHER WARNING SYSTEM.

THE HIGHWAY IN ONTARIO

Ontario's highways compare favourably with highway anywhere in the world. In each jurisdiction the Committee visited, Ontario was recognized as being a leader in safe highway design. Its highways are considered a model for other jurisdictions.

Accordingly, the Committee recommends that:

- IX-6: THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD BE COMMENDED FOR ITS EFFORTS TO CREATE A SAFELY DESIGNED HIGHWAY SYSTEM, AND SHOULD BE ENCOURAGED TO CONTINUE ITS EFFORTS IN THIS REGARD.

SUMMARY OF SECTION X

ADMINISTRATION AND RESEARCH

Road safety is a particularly difficult area of public policy to organize because it involves many different public and private concerns. It would be unrealistic to seek to centre all responsibility for administration and research in one place. Instead, the Committee dealt with the coordination of these responsibilities at the provincial level, and concerns itself in this section with means of establishing a point of focus within the provincial government and ensuring that the benefits of research are fully exploited.

ESTABLISHING A POINT OF FOCUS WITHIN THE PROVINCIAL GOVERNMENT

The Committee believes that a point of focus for road safety concerns should be identified within the government structure for three reasons: there are problems of interministerial coordination; other jurisdictions have demonstrated the usefulness of a coordinated approach; and, many of the new initiatives of this Committee will require a coordinated approach. The point of focus should be located in the Ministry of Transportation and Communications, because it has overall responsibility for drivers, vehicles, and roads, and keeps data on roads and accidents.

Accordingly, the Committee recommends that:

- X-1: THE GOVERNMENT OF ONTARIO SHOULD APPOINT A ROAD SAFETY COORDINATOR REPORTING TO THE DEPUTY MINISTER OF THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS TO DEVELOP AND CO-ORDINATE THE OVERALL ROAD SAFETY PROGRAM WITHIN THE GOVERNMENT STRUCTURE, BE A POINT OF CONTACT WITH INTERESTED GROUPS OUTSIDE THE GOVERNMENT, AND MONITOR ROAD SAFETY ACTIVITY THROUGHOUT THE WORLD.

One specific area that the road safety coordinator could be responsible for is crash rescue. Currently, rescue work is carried out by local fire departments or volunteer rescue groups. There is no provincial program or point of contact within the provincial government for financial or other assistance for rescue work. This gap may deprive the less populated areas of the benefits of advances in rescue equipment.

Accordingly, the Committee recommends that:

- X-2: THE GOVERNMENT OF ONTARIO SHOULD ASSIGN RESPONSIBILITY FOR DEVELOPING A PROVINCIAL CRASH RESCUE PROGRAM TO THE ROAD SAFETY COORDINATOR.

GAINING THE FULL BENEFIT FROM RESEARCH

The Committee was impressed throughout the hearings by the need for continuing research on road safety. It was impressed, as well, by the amount of research that is already being conducted. This part of the report reviews the research activity that Ontario can draw on, and recommends the research approach the Province should take.

The Committee concluded that Ontario need not develop its own research institute or major road safety research program. Ontario has a good record of implementing new road safety ideas promptly. In so doing, it has often been the beneficiary of research funded and carried out in other jurisdictions as well as the research MTC has funded to meet a demonstrated need in the Province. It should continue to make the best use of available research. The Road Safety Coordinator and staff should ensure that the Province is kept aware of promising developments around the world. And the apparently expanding federal research program should be kept relevant to specific Canadian concerns. Ontario should try to influence the federal research program to ensure that it meets predetermined objectives.

Accordingly, the Committee recommends that:

- X-3: THE GOVERNMENT OF ONTARIO SHOULD PRESS FOR THE CREATION OF A FEDERAL-PROVINCIAL BODY THAT WOULD SUGGEST PRIORITIES FOR FEDERAL ROAD SAFETY RESEARCH AND COORDINATE ALL ROAD SAFETY RESEARCH ACTIVITIES OF GOVERNMENTS IN CANADA.

The greatest area of need for road safety research in Ontario is in the evaluation of the Province's existing programs.

Accordingly, the Committee recommends that:

- X-4: THE GOVERNMENT OF ONTARIO SHOULD GIVE THE HIGHEST PRIORITY IN ROAD SAFETY RESEARCH TO THE EVALUATION OF THE EFFECTIVENESS OF CURRENT ROAD SAFETY PROGRAMS.

Final Report

Final Report

SECTION II

DRIVER TRAINING

The promise of formal driver training is that it educates the new driver to perform more effectively on the road than casual instruction from family or friends, and can reduce the incidence of driver error. Accident statistics support the concept of driver training:

§ Driver error is listed as the major cause of up to 90% of reported accidents

§ New drivers - those in their first year of driving - are involved in accidents at about twice the rate of experienced drivers.

Formal driver training, which is offered in Ontario through public high schools as well as a private commercial industry, enjoys wide public support. High school driver education in particular is viewed positively as training that will improve driver performance and reduce accidents. A survey conducted in 1974 on behalf of the Ministry of Education's Task Force on Driver Education found that 92% of the Ontarians surveyed were convinced that high school driver education programs would significantly reduce the accident rate. For that reason, 90% believed that these courses should be offered in all of the Province's secondary schools, and 56% believed that all high school students should be compelled to take such a course. A recent national survey of attitudes towards driver education among school administrators by the Canada Safety Council elicited strikingly similar views.

The findings of these surveys were consistent with the views expressed by the public during the Committee's hearings around the Province. Although there was very little consensus on most road safety issues, support for driver education in the high schools appeared to be overwhelming. Typical of the views expressed were those of a private citizen in Ottawa, who asserted that a new driver requires training "to achieve greater awareness of driver responsibility, safe driving concepts, principles of collision avoidance and a greater understanding of driving rules that form the basis

for the safe operation of a motor vehicle in the traffic system". The Metropolitan Citizens Safety Council of Toronto recommended that "all applicants for a driver's test in Ontario must produce evidence of having successfully completed an approved driving course of driver instruction".

The Committee found, however, that driver training does not live up to its promise: all careful studies have shown that it is, at best, of questionable value in reducing accidents and fatalities. It seems that new drivers with similar backgrounds have much the same driving records whether they take driver training or not.

The Committee therefore addresses itself in this section of the report to ways of improving the safety value of driver training in both the high schools and driving schools, and to the need for more training for motorcycle drivers.

MAXIMIZING THE IMPACT OF THE HIGH SCHOOL DRIVER TRAINING CURRICULUM

Since 1960, driver training has become an accepted course at the high school level of every school board in Ontario. More than 44,000 new drivers, or nearly 15% of applicants for driver's licences, were trained in high school courses in 1976. This part of the report considers the reasons for the introduction of high school driver training programs, the effectiveness of current offerings and the need to add safety to the driver training curriculum.

Introducing Driver Training in Ontario Schools

Although the first known driver training program was developed in 1916 in the United States, the introduction of driver training in Canadian high schools was a slow and difficult process. In 1930, Dr. Amos Neyhart began "behind-the-wheel" driver training of American high school students on a voluntary basis. His subsequent 35-year association with the Ontario Safety League (OSL), as a consultant, made the organization a Canadian leader in driver training. Even so, it was not until

1948 that the first driver education courses were introduced in Ontario high schools, through a Kitchener-Waterloo area project that offered 40 hours of classroom instruction but no behind-the-wheel training. And even in 1960, only 36 of Ontario's 380 high schools offered driver education courses.

Gradually, however, the initial reluctance of educators and the public in Ontario to treat driver training as a legitimate course offering at the secondary school level was overcome by the widespread publicity given programs in the U. S. schools and by researchers' claims of their life-saving value. In 1960, the Government of Ontario, under great pressure to extend the availability of these "life-saving" courses, endorsed driver training programs for the Province's secondary schools, and began to provide financial and material assistance for them.

The key features of the Province's high school driver training policy are the following:

- § Courses must be extracurricular, under the supervision of the school principal, and approved by the local school board
- § Students must be given 25 hours of classroom instruction, six hours of practice driving in cars with automatic transmission or eight hours in cars without transmission, as well as 12 hours as observers in vehicles while other students receive instruction
- § Teachers, both in class and in car, are required to be graduates of a recognized course for instructors in secondary school driver instruction. In-car instructors are licensed by the Ministry of Transportation and Communications (MTC)
- § Instruction vehicles must be equipped with dual-control mechanisms and covered by an insurance policy that meets certain defined minimum coverage standards
- § Expenses incurred by the Board for driver education are now considered part of the board's operating expenditures, and are included as such for grant purposes, provided that the board's total operating expenditures do not exceed the board's ceiling per pupil.

The government's involvement caused driver training in high schools to expand dramatically. Today, 568 secondary schools offer the program, and in the 1975-1976 school year more than 44,000 students completed such courses.

Over the years, attempts have been made to improve the quality of the driver education courses offered in Ontario high schools:

- § Courses for teachers have slowly been strengthened. Special teacher preparation courses in driver training are now offered to interested teachers at different locations in the Province. A new syllabus issued in 1970 extended these courses from two to three weeks, and increased considerably the in-car instruction provided driving teachers
- § High school course content has also been improved. In 1970, a textbook tailored to Canadian requirements was published. In addition, an updated version of the teacher's instruction manual, including a detailed syllabus with lesson plans sufficient to cover a ten-week school course, was made available in 1973.

Assessing the Real Effectiveness of Driver Training Courses

The Committee was concerned to establish whether young drivers who have received high school driver training in fact have better crash records than do the same type of young drivers who are trained elsewhere. As suggested above, the widespread support for driver training in high schools appears to arise mainly from the hope and the belief that classroom education combined with behind-the-wheel training will reduce the number of automobile crashes. Some proponents invoke the argument that logically, education cannot help but improve the situation. Others base their conviction on the findings of a large number of studies of the effectiveness of high school driver education conducted 15 to 20 years ago in the United States. Most of these studies concluded that graduates of such programs had significantly fewer crashes than non-graduates, and that courses involving behind-the-wheel training were more effective than courses conducted in the classroom only. Unfortunately, recent studies have cast real doubts on the safety value of driver training.

In the mid-1960s, researchers began to recognize that the early studies "proving" the safety value of high school driver training lacked objectivity, and to make new attempts to evaluate its effectiveness. The Driver Education Evaluation Program (DEEP) study report to Congress by the U.S. National Highway Traffic Safety Administration (NHTSA) in July of 1975 concluded that these early studies could be characterized as follows:

- § Most were conducted to support the conclusion that high school driver training was effective, rather than to document such effectiveness objectively
- § All involved post-hoc examination of driver records rather than tracing the performance of persons pre-assigned to various groups in a random or unbiased fashion
- § Few attempted to control the effects of extraneous variables known to be significantly related to crashes (e.g., socio-economic status, sex, driving exposure).

As a result of its fresh efforts, the research community came to question seriously the long-established and widely held view that high school driver training, of itself, produced safer drivers. A 1969 American study by McGuire and Kersh concluded that high school driver training bore absolutely no casual relationship to either traffic violations or crash frequency. The majority of researchers, however, have been less definite in their conclusions. The majority view of the most recent and reliable research into this issue was summarized for the Committee by Dr. James McKnight, president of the National Public Services Research Institute in the U.S., who stated that "we don't have any evidence as to whether driver education does or does not have any effect on accidents or violations".

Several other witnesses appearing before the Committee supported this assessment. For example, H.J. Aiken of the Ministry of Transportation and Communications, in considering whether young drivers who have had the benefit of a driver education course had lower rates of accident involvement, stated that "generally speaking, it is fair to say that there is no conclusive evidence that driver education brings about these results".

Unfortunately, it is likely, most experts hold, that current driver education courses are largely ineffective in reducing subsequent accident involvement. Concerning current programs in Ontario, S.F. Andrunyk of the Ontario Safety League advised the Committee that "regardless of the good intentions and stated objectives of our current driver education programs, their effectiveness is questionable if judged by the criteria of reducing accidents and fatalities". Commenting on the "average" high school driver education program in the United States, Dr. McKnight stated that:

"I would not bet it would have any effect at all. Because driver education as it is taught in the average community throughout the United States is ineffective as an accident countermeasure, I can't believe that it would have much effect. I don't know what it is in Canada; it is kind of hard for me to believe that it stops suddenly at the border".

Researchers in road safety continue to believe, however, that high school driver training has the potential to reduce accident involvement. The NHTSA has taken the position that a quality high school driver training program is capable of reducing by 10% to 15% the likelihood of involvement in a crash among persons taking such courses. The NHTSA has also concluded that high school driver training offers as much behaviour modification and crash reduction potential for new drivers as any other form of short-term intervention. A 1968 report on traffic safety to the U.S. Department of Health, Education and Welfare urged that existing driver education programs be continued while immediate improvements were studied and implemented.

Adding Safety to the Driver Training Curriculum

The Committee endorses the view that effective programs of high school driver training should form an integral part of a comprehensive approach to road safety. The question, as L.P. Lonero of the Ministry of Transportation and Communications succinctly put it, is how to "change the programs in order to maximize their impact, to make sure that they work as well as they possibly can".

Despite the efforts to strengthen driver education over the years, there are many problems with high school driver training in Ontario today. The entire provincial approach was criticized by Mr. C. O'Hearn, the course director for the Ontario Safety League, who said it "lacks credibility ... The effort is there, it intends to be good, but it is really Mickey Mouse".

Resolution of the major weaknesses of high school driver training in Ontario has been delayed by the split of responsibility for driver training within the Government of Ontario between the Ministry of Education and the Ministry of Transportation and Communications. These weaknesses are the following:

1. The high school course content is not sufficiently safety-oriented. To produce safe drivers, driver education courses must be directed towards the development of mechanical, perceptual and judgmental skills. The content of the high school courses does not give sufficient stress to the factors that cause accidents or to developing the skills that will enable drivers to avoid them. Also, it is unclear that the current classroom and in-car instruction time standard is sufficient to allow the development of an adequate safety program.

2. Both the supply of teachers and their training are inadequate. Many students are turned away from driver training courses because too few teachers are available. The number of new in-school teachers trained yearly is insufficient to meet the continuing growth of student demand. Because of the short supply and the requirement that each student receive a minimum of six hours of individual behind-the-wheel instruction, the Ministry of Transportation and Communications has authorized school boards to employ commercial driving instructors for in-car instruction provided they have taken a two-week course given by the Ontario Safety League.

Driver training is a secondary job for nearly all high school driver training teachers. Almost all teach other subjects as their main assignment. As well, the training provided to the high school driving teacher is still quite minimal.

3. The success of the program has never been evaluated. Although course objectives for high school driver training were established in 1960, a review of the program has never been carried out. MTC advised the Committee that it had neither the time nor the money to evaluate it.

It is apparent to the Committee that the current programs must be changed in order to maximize their safety impact. If driver education is ever to be effective, this must be achieved through the creation of a new, safety-oriented curriculum. It is equally apparent that the question of the effectiveness of high school driver education programs should be subjected to rigorous research and evaluated against clearly defined goals and objectives.

The Committee is aware that the NHTSA has pursued a long-term plan aimed at the development of an objective and performance-based high school driver education curriculum. The NHTSA's so-called "safe performance curriculum" is currently being evaluated through an extensive project in Georgia. Other curricula have been developed and are being tested (although to a lesser extent) in various parts of the United States and Canada. Ontario must not, however, simply rely on programs being instituted and tested elsewhere, particularly in light of the general agreement by experts that the Province's current courses are likely to be ineffective in reducing subsequent accidents.

Accordingly, the Committee recommends that:

RECOMMENDATION II-1: THE GOVERNMENT OF ONTARIO SHOULD ACCEPT THE RESPONSIBILITY FOR DEVELOPING AND EVALUATING A DRIVER TRAINING PROGRAM FOR ONTARIO THAT MEETS SPECIFIC SAFETY OBJECTIVES.

IMPROVING THE QUALITY OF COMMERCIAL DRIVING SCHOOLS

The size of the commercial driving school industry in Ontario is difficult to determine since statistics are not gathered on the number of students in any given year or the dollar volume of business. In fact, about all that is known is that at the beginning of 1977 there were approximately 400 commercial driving schools in Ontario and that in 1976, 536 new licences and 1,979 renewals were issued to commercial driving school instructors.

Instruction of new drivers by commercial driving schools is a normal pattern in Europe. In Sweden, for example, with a population about the same size as Ontario's, there are 760 driving schools, all tightly controlled and supervised by the government. New drivers are not required to take formal training, but those who do have a significantly better chance of passing the driving test. In The Netherlands, a learning driver is permitted to drive only in a car with dual controls, making it almost imperative that the driver take instruction from an equipped driving instructor. The Dutch government is just beginning to exercise some control over the quality of the Dutch commercial driving school industry.

The Committee heard a great deal about the need for specific public regulation of the industry in Ontario. After reviewing existing controls over the industry, however, it has concluded that it would be more productive to enforce current business practice legislation and to concentrate on improving the overall quality of driving instructors.

Examining The Pressures For Regulation

The Committee was frequently urged to recommend that the commercial driving school industry be publicly regulated. Advocates of regulation ranged from the Ontario Safety League and the Ontario Motor League to industry organizations. The Ministry of Transportation and Communications advised the Committee that it is examining the means whereby the commercial driving school industry could be brought under some regulation.

Much pressure for regulation of commercial driving schools came from persons concerned with alleged bad business practices in the industry. Submissions made to the Committee during its public hearings gave evidence of general distrust of the commercial driving school industry on grounds of unreliability and exploitative financial practices. One submission suggested that commercial driving schools have in fact given driver education in general "a bad name". The OSL in particular was highly critical of the business practices of many commercial driving schools.

Witnesses raised two other specific reasons for regulating the commercial driving school industry. First, many were concerned about the quality of the in-car instructor and second, many thought it necessary to supervise the entire industry to ensure that it provides courses with an adequate safety content.

A related concern is that the commercial driving school industry appears to constitute a transitional occupation for many of its practitioners. A brief presented to the first national symposium on driver education sponsored by the Canada Safety Council in 1974 estimated that between 40% and 60% of driving instructors leave the field before their fifth year. Up to 60% train drivers as a sideline or as a temporary step towards something else.

Assessing Current Controls on the Industry

The only component of the commercial driver training industry currently subject to any provincial regulation is the driving instructor. The Highway Traffic Act sets out the requirements for obtaining a commercial driving instructor's licence. In essence, a driving instructor's licence may be issued to any applicant aged 21 or over who holds a valid driving licence issued at least one year prior to the application, meets a character test, and demonstrates the ability to instruct in the safe operation of that vehicle. The applicant must pass a written test and a specific driving test that differs from the driving test administered to private automobile drivers.

Otherwise, the only regulation of the commercial driving school industry is provided by the Ontario Safety League, which has been designated by the Insurers' Advisory Organization and the Association of Independent Insurers as the approving body for the industry. Graduates of approved OSL driver training courses are entitled to insurance discounts of up to 44%.

The OSL has established a series of minimum standards that a school must meet in order to obtain its approval. At a minimum, the school must provide:

- § Twenty-five hours of in-class instruction along with six hours of behind-the-wheel training provided by a licensed instructor
- § Classroom facilities with adequate lighting, heating, ventilation and at least 200 square feet of floor space, with seating and writing surfaces for no fewer than 15 students

§ One duly licensed and inspected vehicle and one instructor for every six students.

The instruction time standard of the OSL program is consistent with the approach used in high school driver education, but here, too, it is unclear whether this standard is sufficient to allow for the full development of a safety oriented program. The OSL itself recognizes that most instructors are limited in their factual knowledge of the skills required in accident avoidance procedures, and attempts to correct the situation during a two-week "base course for driver instructors", but thinks that the course is far too short.

Only about 40 of the Province's commercial driving schools - approximately 10% - operate with OSL approval. The quality of the service provided by other schools was criticized often before the Committee. The OSL recognized, however, that some of the courses offered by non-approved schools may be adequate.

Developing a Productive Approach to Improving The Industry

The Committee gave very serious consideration to regulating the commercial driving school industry. The demand for regulation is impressive. The Committee has decided, however, that new, specific regulation is not needed to deal with "bad business" practices in the industry or to improve the quality of instruction.

With respect to bad business practices, the Committee notes the existence of the misleading advertising section of The Combines Investigation Act along with several relevant sections of The Ontario Business Practices Act. It is the view of the Committee that if in fact sectors of the industry are engaging in such practices, the strict enforcement of existing laws will be sufficient to remedy the situation.

It is important to note that the Committee did not receive any evidence to verify a single incident of specific "wrongdoing" by a commercial driving school. The Committee was told that the Ministry of Transportation and Communications, the Ministry of Consumer and Commercial Relations, the Better Business Bureau and municipalities with a licensing function receive very few complaints. On the other hand, members of the legislature do receive a noticeable number of complaints in their constituency offices. Government authorities may receive few complaints because the public does not know the appropriate agency to contact.

Accordingly, the Committee recommends that:

RECOMMENDATION II-2: THE GOVERNMENT OF ONTARIO SHOULD CLEARLY AND PUBLICLY DESIGNATE THE MINISTRY OF CONSUMER AND COMMERCIAL RELATIONS AS THE APPROPRIATE AGENCY FOR THE STRICT AND ACTIVE ENFORCEMENT OF ALL RELEVANT CONSUMER PROTECTION LEGISLATION.

The Committee likewise sees no particular merit in requiring commercial driving schools to offer a set curriculum or to maintain classroom facilities. Too little is known about the value of classroom instruction to insist that it become an integral part of the training for every person being taught to drive by a commercial driving school. As well, it does not seem appropriate to set either minimum or maximum time limits for behind-the-wheel training. Very little appears to be known about the optimal length of courses, a question that is further complicated by existing variances in course content. In developing new curricula it is possible that the emphasis should be on performance rather than time. Rather, the thrust of the Committee's recommendations is to ensure that those persons licensed as commercial driving instructors be adequately screened so as to be capable of providing the best service possible. The Ministry of Transportation and Communications advised the Committee that it is in the process of putting forward a "very much more demanding" program for licensing of commercial driving school instructors. The Committee supports this initiative.

Accordingly, the Committee recommends that:

RECOMMENDATION II-3: THE GOVERNMENT OF ONTARIO SHOULD DEVELOP AND IMPLEMENT A NEW SET OF STANDARDS FOR A NEW CLASS OF DRIVING INSTRUCTOR'S CERTIFICATE, REQUIRING FAR GREATER KNOWLEDGE AND TEACHING SKILL THAN THE CURRENT PERMIT.

The Committee is also of the view that the training required of driving instructors must be upgraded significantly, and must be structured to emphasize the "professionalism" of the vocation. In addition, programs to train potential instructors should be available in as many areas of the Province as is practicable.

Accordingly, the Committee recommends that:

RECOMMENDATION II-4: THE GOVERNMENT OF ONTARIO SHOULD ENCOURAGE COMMUNITY COLLEGES TO OFFER A DRIVING INSTRUCTION PROGRAM THAT WILL OFFER TRAINING TO THE STANDARD OF THE NEW CERTIFICATE.

ENSURING THAT
MOTORCYCLISTS HAVE
ADEQUATE SKILLS

Between 1970 and 1975, the number of motorcycle drivers and passengers killed and injured each year steadily increased. The fatality rate for motorcycle drivers in 1975 was 56.4 per 100,000 drivers - over four times the rate for all motor vehicle drivers (Exhibit II-2). The fatality rate for motorcycle drivers in 1976 at 42.8 per 100,000 drivers was nearly four times the rate for all vehicle drivers.

The motorcyclist puts himself at risk on the roads. Studies in the United Kingdom have shown that in 75% of collisions involving motorcycles, the motorcyclist was not at fault. Quite often, the driver of the four-wheeled vehicle fails to see or take account of the motorcycle. And, in 90% of all collisions, the motorcycle driver is killed or injured. This is about the reverse of the situation with four-wheeled vehicles.

Driving a motorcycle safely, then, demands special skills. The driver must be especially capable of anticipating and avoiding potentially dangerous situations as well as driving with the normal care and attention required of all road users.

The Canada Safety Council recognized the special problem of the motorcyclist some years ago. Noting that a large majority of motorcycle accidents occurred among novice riders gaining their experience for the most part on public roads and highways, the Council designed a motorcycle training course that is available in Ontario through the Ontario Safety League and provincial and local motorcycle associations.

The Committee believes that the Council's course offers real benefits to new motorcyclists, and was impressed by its wide availability.

Accordingly, the Committee recommends that:

RECOMMENDATION II-5: THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD URGE ALL NEW MOTORCYCLE DRIVERS TO TAKE THE CANADA SAFETY COUNCIL MOTORCYCLE TRAINING COURSE, AND SHOULD ENCOURAGE ITS SPREAD TO CENTRES NOT NOW BEING SERVED.

SECTION III

TESTING AND LICENSING

The testing and licensing functions appear to offer enormous potential for promoting the highest driving standards. In theory, issuance of the first licence should provide an opportunity to set high standards of physical ability, driving skills and knowledge of the rules of the road. Licence renewal should provide an opportunity for regular reassessment of ability, skills and knowledge. Traffic violations and responsibility for accidents should provide a basis for suspending the licence of those who do not or cannot drive safely. The process of giving, denying or suspending licences should keep the "problem" driver off the road.

Unfortunately, much of the apparent potential of testing and licensing is illusory. The Committee discovered two important truths about road safety: the average "safe" driver causes most accidents; and, denial of a licence will not stop people from driving.

It is the average driver who is responsible for most accidents. Only about seven or eight percent of drivers are involved in accidents in any one year and, for the most part, it is a different seven or eight percent each year.

§ A study made in Maryland in 1970-71 found that 77% of drivers involved in fatal crashes had either one or no convictions for violations in the three previous years

§ A study of Ontario drivers by Dr. Mary Chipman of the University of Toronto showed that 85% to 90% of the drivers who accumulated 12 demerit points in 1970 did not have an accident in the next year.

No reliable, fair method has been devised to screen out the "problem" driver. Most accidents are caused by the erratic or inattentive behaviour of the average "safe" driver. All of us are the problem.

Furthermore, the desire to drive, to be mobile, is so compelling in our society that denial of a licence often fails to stop people from driving. Studies in California and Oregon have shown that one-third to one-half of all drivers whose licences are suspended continue to drive during the period of suspension. There is no licensing system that is totally enforceable. If the standard for obtaining and retaining a licence is set unreasonably high, a significant amount of noncompliance can be expected.

These caveats are not meant to suggest that testing and licensing perform no useful function in road safety. In fact, if reasonable standards are set and maintained, a high degree of voluntary compliance will follow. In this section of the report, the Committee will discuss and make recommendations about: the test for a first licence; the use of demerit points to identify problem drivers for corrective action; the development of a special licence for new drivers; and the problems of licensing drivers with physical disabilities.

THE FIRST LICENCE: GAINING THE RIGHT TO SOLO

About 300,000 new drivers apply for a first licence each year in Ontario. They are required to complete successfully a three-part Ministry of Transportation and Communications examination comprising:

- A written test that generally covers the rules of the road
- A sight test that assesses vision and sign recognition
- A practical test consisting of 15 to 25 minutes of driving with an examiner to ensure adequate physical skill in handling and controlling a vehicle.

Ontario's examination is generally as comprehensive and complete as those of other North American jurisdictions. The failure rate of about 33% (most failures are on the practical section of the test) is also comparable to those of most other jurisdictions. Some jurisdictions have, however, established more rigorous tests.

- § Sweden gives a practical driving test that takes about 30 minutes, is conducted on several different types of roads, and includes both manual and automatic transmissions and, occasionally, night driving. Sweden sets a high standard to encourage people to take driving training. The failure rate is not significantly different from Ontario's; licence applicants with driver training have a 29% failure rate, those without a 41% failure rate
- § The practical driving test in The Netherlands takes about one hour and the failure rate of about 50% is the highest the Committee encountered
- § The State of Washington has tried an automated driver improvement test that combines 81 coded slides in a carousel projector with 42 situation exam questions. The failure rate reached 47% as compared to 20% on Ontario's written test.

The Committee probed the witnesses appearing before it to determine whether there would be any safety benefits in making Ontario's test more comprehensive, or the standard higher. Three reasons were given for making it more difficult to pass the test: (1) to set a higher standard for driver skills; (2) to screen licence applicants more carefully in order to eliminate incompetent or probable accident-causing drivers; and (3) to provide a new driver with a diagnosis of his driving faults as a guide for remedial action. Each is discussed below.

1. Standard setting is an acknowledged objective of the Ontario tests. MTC reported that, over time, it has gradually raised the driving test standard. Today's test is more exacting than that of a few years ago, in keeping with today's more complex traffic conditions. Even now, however, the Ministry does not pretend that its test is setting a very high standard. In the words of one of its spokesmen:

"The set standard is what are the minimum skills that would permit the person to go on the road, predictably, at the level of his experience and training, to solo safely. It's understood that from this point on there is much to be learned".

Until the capacity and acknowledged effectiveness of driver training is substantially improved, there is no justification for setting an even higher standard for driver skills.

2. Screening is accomplished by the Ontario test in that about one applicant in three fails. The Ministry has considerable support for its position that there is little safety value in making the test significantly more difficult.

§ Experts testified that no positive relationship has ever been established between performance on the driving test and subsequent accident involvement

§ A U.S. study by the Insurance Institute for Highway Safety showed that highly skilled drivers who had achieved a national car racing standard had above-average collision rates

§ MTC abandoned the retesting of drivers whose licences had been suspended for impaired driving on discovering that their failure rate was negligible (about 0.5%).

"Problem" drivers know how to drive.

3. Diagnosis of driving faults takes place in Ontario as elsewhere in that the examiner points out the applicant's errors, but there is no specific follow-up in the form of a remedial program of instruction; the applicant returns and tries again. The Committee found no jurisdiction that had organized itself to provide a remedial instruction program.

Overall, the Committee found that Ontario's driving test met the "best industry practice" standard. For the future, MTC is developing an off-street testing track that will be more efficient - increasing the number of tests per examiner day from 16 to 26 - and more effective - allowing the controlled testing of more car-handling skills.

USING DEMERIT POINTS TO MAINTAIN AN ACCEPTABLE STANDARD

The licence is automatically renewable for most drivers who have passed the driver test in Ontario and most other provinces, as well as most states in the U.S.

In Ontario, some drivers are retested. Drivers are retested: annually from age 80; following a collision from age 70; if they are accident repeaters (contributing to three accidents in two years); every three years to age 65, if they are school bus drivers, and annually thereafter;

if they change licence classes (e.g., from operator to chauffeur); after recovering from a serious physical or medical impairment; after reinstatement of a licence suspended under the demerit point system. The list appears long. In fact, those retested in 1976 amounted to only about 35,000 drivers or less than 1% of all licence holders.

It was suggested to the Committee that all drivers be retested every five or ten years. The Committee found no jurisdiction where driving skills are routinely retested, and concluded that the inconvenience and expense of such a program could not be justified.

Ontario maintains some control of the licensed driver by keeping track of convictions under The Highway Traffic Act, assigning demerit points for certain offences, and taking action when demerit points accumulate to certain levels. Ontario was one of the first jurisdictions to institute a demerit point system - an approach that, with local variations, is now widely accepted in North America. Exhibit III-1 lists the offences for which points are assigned and the points assigned to them. The Ministry intervenes when points accumulated over a two-year period reach six, nine and 15. Research indicates that early interventions are worthwhile.

§ At six points, the driver is sent a letter advising that this level has been reached and warning about the consequences of further violations. In 1975, 103,747 such letters were issued. A properly prepared warning letter is generally agreed to be one of the most cost-effective highway safety measures currently in use in terms of reducing subsequent accidents and violations of recipient groups. The reduction is not very large, but the cost of sending the letter is small

§ At nine points, the driver must appear for a personal interview with a Ministry officer who has the power to recommend that the Registrar suspend the licence, although in practice this is seldom done. In 1975, 30,112 interviews were carried out. A properly conducted personal interview has also been shown to have a positive impact. The cost-effectiveness of the personal interview is not as great as that of the warning letter, because its cost is considerably higher. Many studies throughout North America have shown that the savings, in terms of subsequent reduction in accidents among the interviewed groups, are still worthwhile

§ At 15 points, the driver's licence is suspended for three months, after which it is returned and the driver starts again with seven points. In 1975, about 7,000 licences were suspended for having reached 15 points. However, as noted above, denial of a licence often does not stop driving. And, research has shown that a licence suspension - like most punitive approaches - is not very effective in reducing subsequent accident involvement. An Oregon survey, for example, showed that suspended drivers who continue to drive make no change in their driving habits. Some jurisdictions have had some success at the 15-point stage, in requiring driver improvement courses or issuing some form of restricted licence.

The demerit point system has two features that can be used to undermine its goals. The first is that points for any offence are retained for only two years and then dropped; the second is that the date on which the points are recorded is the date of the conviction in court, not the date on which the offence took place. Drivers charged with an offence that would result in their acquiring 15 points within the two-year period, if found guilty, often delay the date of their appearance in court until points for an earlier conviction are dropped, and thereby avert a licence suspension.

It is too easy for such drivers to subvert this worthwhile intervention system and, in the process, contribute to the overloading of the courts. Accumulation of points from the date of an offence for which the driver is subsequently found guilty would remove an important incentive to delay court proceedings and strengthen the integrity of the demerit point system.

Accordingly, the Committee recommends that:

RECOMMENDATION III-1: THE GOVERNMENT OF ONTARIO SHOULD AMEND THE HIGHWAY TRAFFIC ACT SO THAT A DRIVER WHO IS FOUND GUILTY OF AN OFFENCE WILL ACCUMULATE DEMERIT POINTS FROM THE DATE ON WHICH THE OFFENCE TOOK PLACE.

Another reason for the ineffectiveness of the suspension is the apparent ease and frequency with which it can be ignored. Police advised the Committee that their task of identifying drivers operating vehicles without a valid licence would be easier if a photograph of the driver were attached to the licence. This would prevent the borrowing of licences. The Committee is also aware of the advantages of a photograph on the driver's licence as a means of identification for other purposes and of its popularity in Europe, many states in the U.S. and British Columbia.

Accordingly, the Committee recommends that:

RECOMMENDATION III-2: THE GOVERNMENT OF ONTARIO SHOULD PROCEED WITH ITS PREVIOUSLY ANNOUNCED PROGRAM OF HAVING THE LICENCEE'S PHOTOGRAPH IMPRINTED ON THE DRIVING LICENCE.

TAKING EARLY STEPS TO HELP YOUNG DRIVERS

The greatest concern of the Committee is the overwhelming evidence of driving problems among young and inexperienced drivers who constitute a vast majority of new licencees. A disproportionately high number of young people are killed and injured in traffic accidents. As shown in Exhibit III-2, drivers have a very high involvement in traffic collisions in their first five years of driving. The younger new drivers have the worst record: 16, 17 and 18-year-olds have more accidents in their first few years of driving than do those licensed at older ages. On the other hand, drivers first licensed at 16 or 17 have lower accident rates at 18 than those first licensed at 18. Teenage drivers' conviction rates are also very high, indicating that young drivers are getting into accidents because of irresponsible driving. As shown in Exhibit III-3, the conviction rate, like the accident rate, is a function of age and experience. For example, 20 to 24-year-old males who were first licensed as teenagers have about four convictions annually for every ten drivers, while those first licensed as 20 to 24-year-olds have about five convictions for every ten drivers.

Suggestions offered for dealing with the young new driver include an increase in the driving age, a licence restricting hours of driving and a probationary licence system. The Committee considered the first suggestion impractical and the second unenforceable.

An increase in the minimum age for obtaining a driver's licence could, it appears, have some impact, but the age would have to be raised to 19 or 20 to have a significant effect. Many young people are working and even raising families at that age. In our vehicle-based society it is simply impractical to contemplate denying driving privileges for so long.

Most advocates of the restricted licence recommend restricting new drivers to daylight hours for an initial phase for two reasons. First, driving is easier in daylight. Second, this system reduces the potentially dangerous mixture of learning to drive and learning to drink amid the peer group pressures of a social situation. However, such a system is virtually unenforceable and would be vigorously resisted - especially by the young people who would be denied work opportunities that require some night driving.

The aim of a probationary licence system is to direct special attention at the licence holder that would lead to an improved driving record. During the term of that licence it would be possible to identify "problem" drivers early and intervene promptly.

Dr. Mary Chipman found clear evidence that young people who have accumulated as few as three to five points have a very high risk of collision. She suggested that:

"Rather than waiting until they have six points, when they get a warning letter, and nine points when they are called in for an interview . . . you perhaps ought to act a little earlier, particularly in that age group".

The Committee finds merit in the concept of a probationary licence. Interventions such as the warning letter and the personal interview have already been found to be effective. A driver-improvement course can be useful if it is directed at the proper group. Further, the Committee has concluded that a licence suspension is an effective deterrent for some people - even if others manage to ignore it.

Accordingly, the Committee recommends that:

RECOMMENDATION III-3: THE GOVERNMENT OF ONTARIO SHOULD DEVELOP AND IMPLEMENT A TWO-YEAR PROBATIONARY LICENCE FOR DRIVERS RECEIVING THEIR FIRST LICENCE THAT WOULD HAVE THE FOLLOWING FEATURES:

- (1) A WARNING LETTER ISSUED AT THREE DEMERIT POINTS
- (2) A PERSONAL INTERVIEW CONDUCTED AT SIX POINTS

(3) A DRIVER-IMPROVEMENT COURSE REQUIRED AT NINE POINTS

(4) A THREE-MONTH SUSPENSION APPLIED AT 12 POINTS

(5) AT THE DISCRETION OF THE COURT, ADDITION OF A YEAR TO THE PROBATIONARY PERIOD IF THE DRIVER GIVES CONTINUOUS EVIDENCE OF IRRESPONSIBLE BEHAVIOUR.

COPING WITH PHYSICAL DISABILITIES

Our licensing system must deal with a great variety of human conditions among all those 16 or over who are eligible to drive. The Committee found grounds for concern in the looseness of the checking for physical disability and the inflexibility of the licensing system.

Tightening The Check For Physical Disabilities

Some physical disabilities (such as an unpredictable tendency to black out) make it unsafe for an individual to drive. Existing provisions for medical checks and retesting, if applied as intended, would prevent persons with these disabilities from holding a driver's licence in Ontario.

§ Applicants for a first licence must submit a medical certificate

§ All physicians have been instructed by the Canadian Medical Association to report to provincial licensing officials patients over 16 in their care whose physical or mental state of health limits their driving ability and makes them a potential danger to themselves or others.

The grounds for medical exclusion are not trivial. They include Parkinsonism, unstable cardiac problems, unpredictable forms of diabetes, and attacks of double vision.

In addition, as noted above, retesting is mandatory for all persons who:

- Contribute to three accidents in two years

- Cause an accident and are over 70
- Are 80 or over
- Have certain classifications of drivers' licences (e.g., school bus driver).

These drivers also must submit a medical certificate.

At present, more than 140,000 individuals over 70 in Ontario have licences. In 1973, 1,260 such persons were re-examined as a result of accident involvement, in 1974, 1,215, and in 1975, 1,154. Approximately one-third of those over 70 who are retested fail (about the same average as new drivers). The nearly 14,000 Ontario drivers over 80 are retested each year, and have a failure rate closer to 50%. Many persons over 80 do not attempt the retest, and simply surrender their licences rather than undergo the examination procedure.

Unfortunately, the retesting provisions do not work as smoothly as this outline would suggest. The vast majority of drivers are never retested until age 80. The major problem involves the physician's willingness to volunteer a report about a patient, possibly breaching doctor-patient confidentiality and losing the patient. A representative of the Ontario Medical Association evaluated the situation:

"The physician feels that he has some confidentiality between him and his patient. When the patient comes to him, you say to him, 'You should not be driving', but I think very few of us actually ring the bell and send the thing into the Department of Transportation".

The Ministry of Transportation and Communications estimates that it examines 2,500 licence holders each year whose ability may be impaired by their state of health. Yet only 500 to 600 of these examinations follow from a physician's report. Many come from reports of collisions caused by individuals who suggest they "blacked out", or lost control because of some sort of attack or seizure.

The result is that drivers with medical disabilities are not all identified to the licensing authorities, and many continue to drive. A system that removes the onus from the physician to volunteer information about a patient is desirable from all points of view. It would require the physician to report his patient's physical or mental disability on a routine basis, without feeling as if he was betraying a trust. It would facilitate the problem of identifying those whose state of health should exclude them from the road.

Many of the conditions listed for exclusion on medical grounds begin to appear at age 45. The Committee believes that a system should be instituted that would require a licensed driver to submit a medical certificate after age 50. In most cases an examination by the physician would not be necessary. The conditions listed are serious enough that both patient and physician would know if they exist.

Accordingly, the Committee recommends that:

RECOMMENDATION III-4: THE GOVERNMENT OF ONTARIO SHOULD REQUIRE THAT EVERY LICENSED DRIVER SUBMIT A FORM COMPLETED BY A PHYSICIAN CERTIFYING THAT, TO THE BEST OF THE PHYSICIAN'S KNOWLEDGE, THE DRIVER DOES NOT SUFFER FROM ANY OF THE SPECIFIED MEDICAL LIMITATIONS, AT EACH LICENCE RENEWAL FOLLOWING THE DRIVER'S 50TH BIRTHDAY.

A particular physical problem is deteriorating eyesight. An eye examination is not routinely required in Ontario for the renewal of an automobile driving licence until age 80, although many insurance companies insist on an eye examination at age 70. The advice given the Committee was that although no firm body of medical opinion exists on the subject, medical practitioners find that deterioration of eyesight begins to become significant at about age 70. The estimate was that about 10% to 15% of the population 70 or older may have impaired vision for one cause or another and may not even be aware of it.

Accordingly, the Committee recommends that:

RECOMMENDATION III-5: THE GOVERNMENT OF ONTARIO SHOULD REQUIRE THAT AN EYE EXAMINATION BE ROUTINELY REQUIRED AT EACH LICENCE RENEWAL AFTER THE APPLICANT'S 70TH BIRTHDAY.

Adding Flexibility to the Licensing System

In Ontario, obtaining a driver's licence is an all-or-nothing proposition: the applicant either meets all the standards and gets a full licence, or fails to qualify for any licence whatsoever. This approach to licensing is particularly hard on older people.

Studies have shown that older people often lack the ability to respond to stress situations. They suffer from failing physical capacities, especially in terms of eyesight. They are personally at greater risk in accident situations because of the problem of withstanding the physical impact of a collision, and they also constitute a greater risk to other drivers.

On the other hand, an older driver who uses a car infrequently and in familiar surroundings may not be nearly as great a hazard on the road as the male teenager. Yet the teenager has a far better chance of studying for and passing a written test and of demonstrating high levels of physical skill.

The Committee rejected the concept of a restricted licence for young people because it would be unenforceable. Although the young may not comply with a restricted licence, it is far more likely that elderly drivers would. They are anxious to maintain the right to drive, despite the recognition of their failing ability. Many do not want driving privileges for extended trips, but just to "buy their groceries", visit friends in the their area, or go to religious services. Their tendency is to respect the law and obey it, with or without a high level of enforcement.

A partial solution to the problem presented by some physically limited drivers is to restrict their driving to daytime only, or to a limited area, or to deny them access to expressways. The most serious visual problem of the elderly, for example, is cataracts, which severely reduce night-time vision. Drivers with this eye condition may be capable of driving during the day, but should not be on the road at night. A restricted licence that allowed only daytime driving might provide a solution.

The Committee believes that a restricted licensing system dealing with physically limited drivers such as the elderly will work effectively if it is made flexible to take into account the particular nature of their physical limitations. This would provide a means of allowing elderly drivers in particular to drive when and where they can do so safely.

Accordingly, the Committee recommends that:

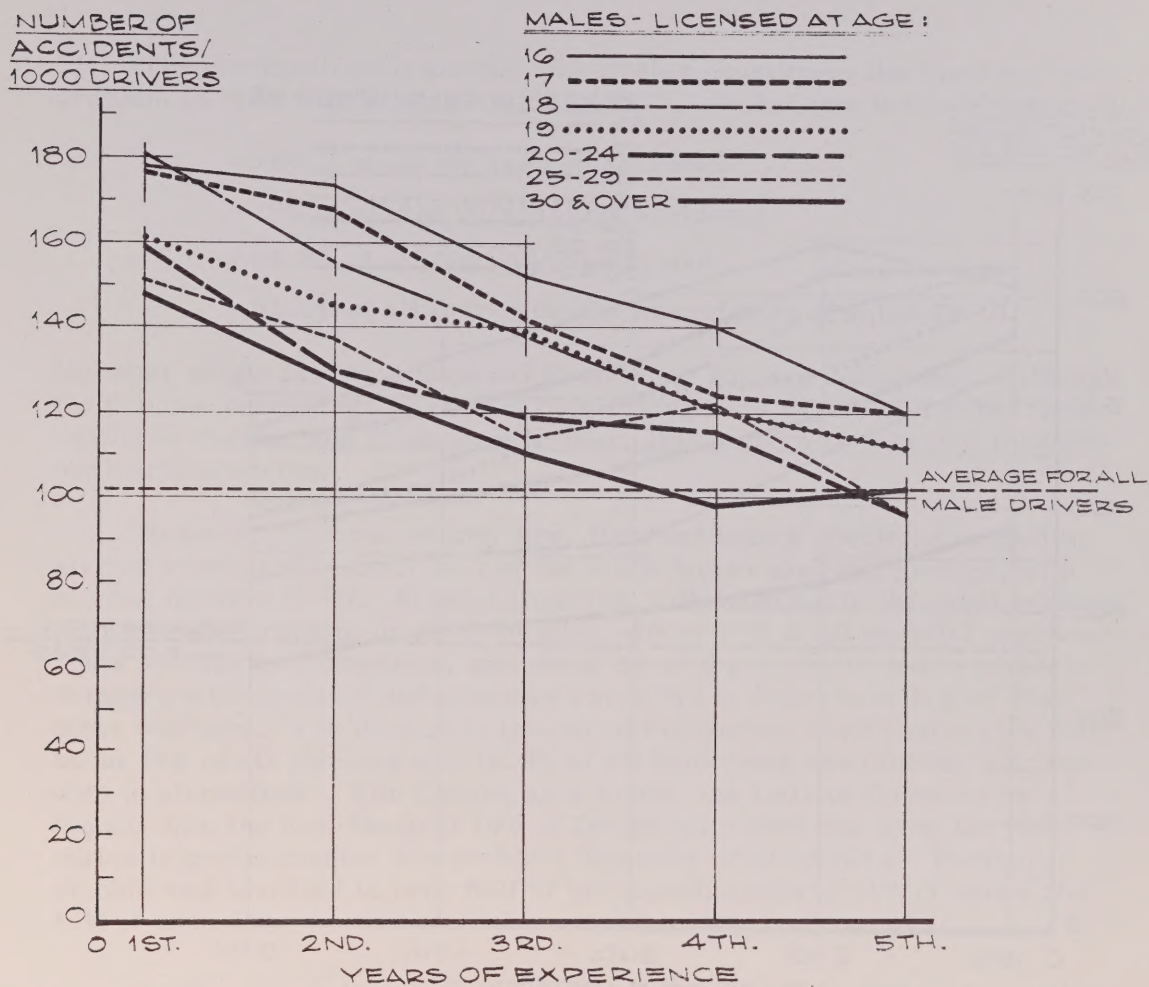
RECOMMENDATION III-6: THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD BE GIVEN THE DISCRETION TO ISSUE AN APPROPRIATELY RESTRICTED LICENCE TO PERSONS WHO FOR PHYSICAL OR MEDICAL REASONS CAN DRIVE SAFELY ONLY ON A LIMITED BASIS.

THERE ARE 28 WAYS TO ACCUMULATE DEMERIT POINTS
UNDER THE HIGHWAY TRAFFIC ACT

Number of Demerit Points	Offence
7	Failing to remain at scene of accident
6	Careless driving Racing Exceeding speed limit by 30 mph or more
5	Driver of bus failing to stop at rail-way crossing
4	Exceeding speed limit by 20 to 29 mph Failing to stop for school bus Following too closely
3	Exceeding speed limit by 11 to 19 mph Driving through, around or under railway crossing barrier Failing to yield right of way Failing to obey a stop sign, signal light or railway crossing signal Failing to obey directions of police constable Failing to report an accident Improper passing Crowding driver's seat Wrong way on a one-way street or highway

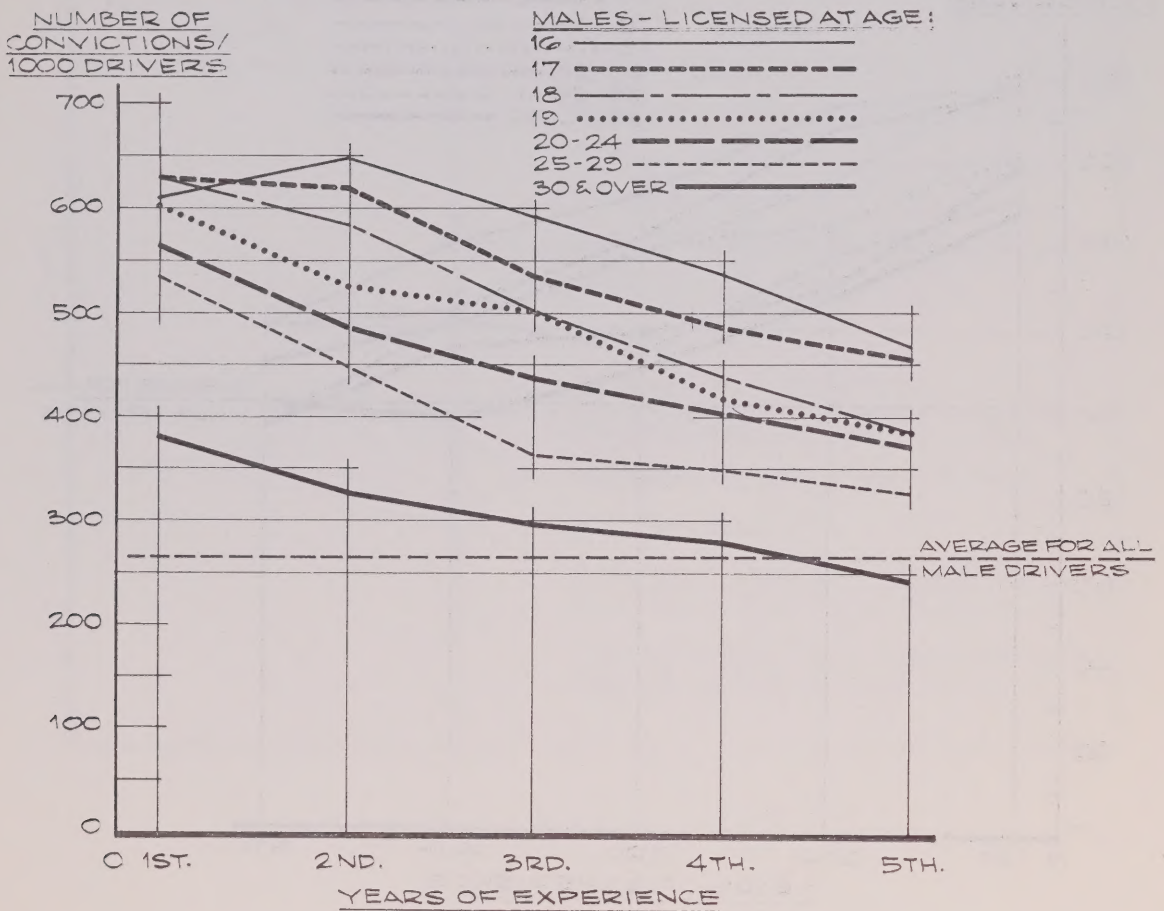
Number of Demerit Points	Offence
2	Failing to yield at pedestrian cross-over Failing to share road Improper right turn Improper left turn Failing to signal Unnecessary slow driving Failing to lower headlamp beam Improper opening of vehicle door Prohibit turns Towing of persons on toboggans, bicycles, skis, etc., prohibited Failing to obey signs prescribed by regulation under Section 125 (1)

IT TAKES ABOUT FIVE YEARS FOR NEW DRIVERS TO REDUCE THEIR ACCIDENT RATE TO THE PROVINCIAL AVERAGE



SOURCE - SYSTEMS RESEARCH & DEVELOPMENT,
ONTARIO MINISTRY OF TRANSPORTATION & COMMUNICATIONS

THE IRRESPONSIBLE BEHAVIOUR OF NEW YOUNG DRIVERS IS
SHOWN BY THEIR HIGH CONVICTION RATE



SOURCE - SYSTEMS RESEARCH & DEVELOPMENT
ONTARIO MINISTRY OF TRANSPORTATION & COMMUNICATIONS

SECTION IV

THE IMPAIRED DRIVER

The combination of alcohol and driving constitutes the most serious problem in road safety. In Ontario in 1975, alcohol was involved in:

- 12% of property damage accidents
- 19% of all non-fatal injury accidents
- 26.5% of all fatal accidents, and
- 51.8% of all driver deaths in accidents (Exhibit IV-1).

No other single factor is involved in so many serious collisions. Although the precise percentage in each of these categories varies somewhat from region to region, and from year to year, this pattern is repeated throughout North America.

However, serious as they are, the road safety problems caused by alcohol represent a small part of the much larger societal problem with alcohol (Exhibit IV-2). Alcohol (together with tobacco) is the most serious public health problem in the Province. About 10% of all hospital occupancy costs are due to alcoholism, and about 5% of the work force are problem drinkers with accident and absentee rates two to four times higher than other workers. The Addiction Research Foundation (ARF) estimates that about 18% of all suicides and 10.6% of all homicides are directly attributable to alcoholism. For Canada as a whole, the LeDain Commission of Inquiry into the Non-Medical Use of Drugs estimated that over one-third of males in penitentiaries are problem drinkers or alcoholics. Further, alcohol was involved in over half of the manslaughters, 39% of rapes and 61% of assaults.

Moreover, alcohol is a growing presence in our society. According to the ARF, the proportion of total abstainers in Ontario has dropped steadily over the past 20 years. Today, about 85 to 90% of the population over age 15 consumes alcohol at least once a year. Among drinkers, 13% drink every day and about 41% drink enough to get high or drunk at least once a year. Per capita consumption has risen by 50% since the early 1950s. The ARF believes that alcoholism is a growing problem. It estimates that there were more than 200,000 alcoholics in Ontario in 1973 - more than twice as many as a decade earlier.

It seems reasonable to conclude that the alcohol factor in road safety will never be completely eradicated as long as the larger societal problem is so pervasive. Further, framing the drinking and driving problem as part of a very large public health problem indicates that simple solutions will not suffice. Improvements will only be found in integrated, multi-faceted, persistent approaches.

To date, the central strategy for controlling drinking and driving has been to deter potential offenders by facilitating the laying of charges, increasing the certainty of conviction and making the penalties more severe. Following the lead of the British, the federal government of Canada in 1969 adopted the "Breathalyzer laws" empowering police to use the machines to facilitate the laying of charges and increasing the ease and certainty of conviction. In 1976, the maximum penalties for conviction under the drinking and driving sections of the Criminal Code were increased, and the police were given the authority to use portable roadside screening devices to aid in the apprehension of impaired drivers. The main rationale for these amendments is the belief that drivers are less likely to drive while impaired if they are convinced that they have a good chance of being caught and, if caught, of facing a certain and severe penalty.

The Committee found the result of increased apprehension and severe penalties to be similar in each jurisdiction it visited. There is an immediate, positive impact: alcohol-related collisions decline. But this is followed - sooner or later - by a return to the previous trends. In Britain, where the introduction in 1967 of new impaired driving laws was well publicized by the government and covered intensively by the media, the positive impact lasted several years. There was an immediate, dramatic drop in the number of alcohol-related fatalities. Only recently has this fatality rate returned to the previous trend projection. The introduction of similar legislation in Canada in 1969 received relatively less intensive and sustained publicity. In Ontario, fatalities from alcohol-related collisions dipped only slightly and for only about two years.

The constant need to develop fresh approaches and to reinforce old approaches to drinking and driving is well recognized and accepted by road safety authorities throughout North America and Europe.

§ In Canada, the most important new approaches being tried are Alberta's "check stop" program and the 24-hour licence suspension in Alberta and British Columbia, whereby police are empowered to suspend the licence of any driver who, although not legally impaired, is a risk to both himself and others

§ In the United States, the federal government has since 1971 put about \$200 million into various demonstration "Alcohol Safety Action Projects" (ASAPs) to test various alternative approaches - some to deal with specific U.S. problems, but many with more general application.

Having gained an understanding of the drinking driver as part of the larger societal problem with alcohol, as well as a grounding in the most recent and innovative approaches, the Committee is recommending a three-pronged attack on the problem of drinking and driving: prevention, management and rehabilitation.

PREVENTION: REDUCING THE SIZE OF THE PROBLEM

The level of apprehension in Ontario is quite similar to that in other provinces. In 1976, police in Ontario charged about 50,000 drivers - about 1.2% of all licensed drivers - under one of three sections of the Criminal Code specifically dealing with drinking and driving. These are: section 234, ability impaired; section 235, refusal to provide breath samples; and section 236, over 80 milligrams of alcohol per 100 millilitres of blood. Nearly all persons convicted are first offenders.

It is clear, however, that relatively few impaired drivers are being apprehended at current enforcement levels. A roadside survey conducted by Statistics Canada revealed that on Thursday, Friday and Saturday evenings about 6.4% of all drivers on the road were legally impaired. It has been estimated by an official of the Ministry of Transport that impaired drivers could drive 26,000 kilometres before being apprehended. Another estimate is that an impaired driver has one chance in 2,000 of being apprehended.

Some way must be found to persuade a significant proportion of potential offenders to refrain from driving in an impaired condition. Even if enforcement levels were doubled (and our police, court and jail system probably could not cope with such an increase), there would still be a very large number of offenders whom the police would never reach. The Committee is advocating two kinds of preventive approaches: providing more information to the public, and introducing new deterrents to teenage drinking and driving.

Providing More Comprehensive Information to the Public

It is important that the Ontario public be aware of both the increased risk of accidents causing injury or death when driving while impaired and the consequences of being convicted under the drinking-driving laws. The efforts made by government in this area are not sufficient to overcome the appeal of advertising portraying alcohol as a desirable and necessary part of the "good life". As well, the danger of impairment from prescription drugs must be publicized more widely.

Governments are increasing their efforts to provide the public with better information on alcohol.

§ General information is being provided through a three-year information program of the Ministry of Health. This program, with an annual budget of about \$1 million, is aimed at increasing levels of knowledge, awareness and understanding of alcohol as a problem, and will specifically address the drinking-driving problem. MTC is currently engaged in a billboard campaign suggesting "think twice before you drink and drive"

§ Information for new drivers currently comes primarily through health-education classes offered in the high schools. MTC is also working with the Ministry of Health to develop a much-needed section on impaired driving for the new driver's instruction manual

§ Information on the recent amendments to drinking-driving laws has only recently become available. The Committee recognized that Canada's drinking-driving laws were failing to achieve their full deterrent impact because people were unaware of them. Therefore, the Committee recommended in its interim report that a document outlining the laws relating to impaired driving be distributed to all motorists renewing vehicle licence plates for 1977 (Recommendation III); MTC printed an appropriate pamphlet and distributed it to all vehicle licence renewal offices. The distribution of an improved pamphlet should be increased by mailing out a copy with each driver's licence renewal form. Meanwhile, the federal government has launched a nationwide multi-media campaign to inform the public of the drinking-driving laws and the reasons why impaired driving is such a serious offence.

While the Committee acknowledges both the good intentions and importance of these government efforts, it is deeply concerned about the "one-shot" nature of many educational programs. Achieving a discernible impact through government educational initiatives will require a commitment to intensive, long-term programs. The Committee was also concerned that the impact of current public programs is being neutralized by powerful advertising linking attractive lifestyles to the consumption of alcohol. The message to young people from the seemingly ubiquitous television advertising is that virtually all recreational activities require the consumption of alcoholic beverages. The Liquor Licence Board of Ontario has the authority to approve all advertising for alcoholic products. It has been successful in eliminating endorsements from well-known people and advertising linking alcohol with enviably attractive people. The Committee is concerned that the newer forms of advertising contain an even stronger and more insidious appeal and must be restricted.

The Committee is aware that alcohol has deep roots in our society. Removing "lifestyle" advertising for alcohol will not stop drinking, but it could, when combined with the government's information campaigns, discourage perpetuation of the myth that alcohol is necessary in any enjoyable social situation.

Accordingly, the Committee recommends that:

RECOMMENDATION IV-1: THE GOVERNMENT OF ONTARIO SHOULD INSTRUCT THE LIQUOR LICENCE BOARD OF ONTARIO TO DEVELOP AND APPLY NEW RESTRICTIVE GUIDELINES ON ADVERTISING PROMOTING ALCOHOL TO FURTHER RESTRICT "LIFESTYLE" ADVERTISING.

A particular area of concern to the Committee is the lack of public awareness of the impairment that can be caused by prescription drugs, alone or in conjunction with alcohol. The Committee discovered that very little is known of the role of such drugs in traffic collisions. However, it is known that some prescription drugs may cause drowsiness and should not be taken before or while driving. For example, each year about one-third of Ontario adults receive prescriptions for mild tranquilizers. While many of these drugs are provided to pharmacists with a package insert that cautions against driving, this instruction is seldom passed on to the patient.

For the most part, then, the Ontario public are not even aware of the risk they take when they drive after taking some relatively common drugs either alone or in conjunction with alcohol. It was suggested that

many drivers would ignore the information if it were available. The Committee sees this argument as no reason to withhold the information from the responsible majority.

Accordingly, the Committee recommends that:

RECOMMENDATION IV-2: THE GOVERNMENT OF ONTARIO SHOULD REQUIRE THAT ALL DRUGS THAT ARE KNOWN OR SUSPECTED TO CAUSE IMPAIRMENT - ALONE OR IN CONJUNCTION WITH ALCOHOL - BE CLEARLY LABELLED WITH AN APPROPRIATE WARNING BY THE DISPENSING PHARMACIST.

Deterring Teenage Drinking and Driving

Young, new drivers figure disproportionately not only in the overall accident statistics but increasingly in alcohol-related accidents as well. In 1967, drivers between 16 and 20 were involved in about 5.5% of all alcohol-related collisions. To the end of the 1960s, teenage involvement in drinking and driving accidents increased slowly but steadily (Exhibit IV-3). After the legal drinking age (and age of majority) was lowered from 21 to 18 in 1971, this involvement increased dramatically. By 1973, teenage drinking drivers were involved in 15% of alcohol-related collisions. By 1975, the proportion was a staggering 37.2% and still rising.

The Committee focussed on two aspects of teenage drinking and driving: the effect of alcohol on the young driver; and the consequences of lowering the legal drinking age in Ontario.

§ Alcohol seems to affect the teenager to a greater extent than older people. Alcohol as a drug produces a general feeling of power and well-being that in a young driver seems to exacerbate accident involvement. Even relatively small amounts of alcohol dramatically increase the accident vulnerability of the teenage driver (Exhibit IV-4). A Traffic Injury Research Foundation study combining the effects of age and drinking has shown that 18 and 19-year-olds are 70 times more likely to die in motor vehicle collisions than the average non-impaired Ontario driver - twice the rate of impaired persons in older age categories. With the least experienced drivers, 16 and 17-year-olds, the risk of collision is 165 times that of the average, non-impaired Ontario driver

§ Lowering the legal drinking age to 18 increased the use of alcohol among all teenagers. The relative increase has been much higher for those under 18 than for 18 and 19-year-olds. The trend towards increased teenage drinking is directly attributable to the lower drinking age. Drinking appears to have become a more entrenched part of teenage social life generally. Legal drinking has even been allowed at social functions in some high schools. Prior to 1971, most 18 to 21-year-olds (over 80%) already drank at least sometimes. Since the lowering of the drinking age, many more teenagers are drinking, and they are beginning to do so at a younger age (Exhibit IV-5).

The Committee is aware of the many compelling reasons for lowering the age of majority and the legal drinking age in tandem. It is now clear, however, that the cost of this decision in terms of road safety has been excessive. The ARF has estimated that if the drinking age had not been lowered:

§ 28 persons would not have died in automobile crashes between August 1971 and July 1972, and

§ 4,450 collisions would not have taken place between August 1971 and July 1973.

The ARF data suggest that the cost in lives, injuries and property damage has been even greater in succeeding years.

This Committee must give primacy to road safety. It has concluded, therefore, that steps must be taken to reduce access to alcohol for the youngest, most vulnerable group of drivers. Noting that 97% of Ontario high school students are 18 or younger, the Committee recommends that:

RECOMMENDATION IV-3: THE GOVERNMENT OF ONTARIO SHOULD RAISE THE LEGAL DRINKING AGE TO 19.

The Committee also believes that specific action should be taken simultaneously against the particular problem of under-age drinking and driving. In Section II of this report, the Committee advocated a two-year probationary licence for all new drivers to ensure early corrective action if a new driver shows signs of irresponsibility or carelessness. Teenagers who drink while under the legal drinking age and then drive are exhibiting the kind of irresponsible behaviour that the probationary system is intended to deter.

Accordingly, the Committee recommends that:

RECOMMENDATION IV-4: THE GOVERNMENT OF ONTARIO SHOULD IMPOSE A THREE-MONTH LICENCE SUSPENSION AND CONCURRENTLY EXTEND THE PERIOD OF THE PROBATIONARY LICENCE FOR ONE YEAR OF ANY PROBATIONARY LICENCE HOLDER CONVICTED OF DRINKING WHILE UNDER THE LEGAL DRINKING AGE, IF THAT PERSON WAS DRIVING WHEN APPREHENDED FOR UNDER-AGE DRINKING.

MANAGING THE DRINKING-DRIVING PROBLEM

While the preventive measures recommended above will, when implemented, deter some drivers from combining drinking and driving, police apprehension of drinking drivers must be upgraded and appropriate legal sanctions must be applied to those who continue to endanger public safety on Ontario roads.

In its interim report, the Committee noted that Ontario's impaired driving penalties are as stringent as those in any jurisdiction. Under the Criminal Code, a driver is liable on first conviction to a fine that ranges from a minimum of \$50 to a maximum of \$2,000, and an optional prison sentence of up to six months, or both. In addition, the convicted driver's licence is automatically suspended for three months under Ontario's Highway Traffic Act. On a second conviction, the driver is liable under the Criminal Code to a maximum of one year and a minimum of 14 days in prison, and under The Highway Traffic Act to a six-month licence suspension. For each subsequent conviction, the driver is liable to a maximum of two years and a minimum of three months in prison. The Highway Traffic Act provides for an even longer licence suspension where appropriate.

The Committee found no justification for recommending a reduction in these penalties. Severe penalties can have some deterrent effect. As indicated above, however, experience in both North America and Europe suggests that people must be aware of the penalties, and believe there is a reasonable chance of apprehension if the penalties are to have a deterrent effect. The sustained information approach advocated above should strengthen the deterrent effect of existing penalties.

The Committee has also concluded that penalties should not be made more severe. It would be futile to attempt to reduce the magnitude of the drinking-driving problem by simply increasing the severity of penalties that are already stringent.

In this part of the report, the Committee therefore focusses on the possibility of increasing the likelihood of apprehending the impaired driver. This part reviews the current legal limits of alcoholic consumption, differentiating between a legal limit and a safe limit, and recommends a measure to remove more impaired drivers from the road.

Setting A

Legal

Limit

A particular concern of the Committee was the amount of alcohol in the blood that should constitute legal impairment. Currently, it is illegal to operate a motor vehicle in Ontario if the concentration of alcohol in the bloodstream exceeds 80 milligrams per 100 millilitres of blood. This means that 80 milligrams is legal; the penalty is applied above 80 milligrams. Since testing equipment is calibrated in 10-milligram units, the illegal concentration is 90 milligrams or over. In Ontario, the courts generally allow a 10% leeway to compensate for any mechanical inadequacy in the testing equipment or error on the part of the technician. In practice, then, the level at which charges are laid is 100 milligrams of alcohol in 100 millilitres of blood.

There is considerable argument internationally about the level of blood alcohol that constitutes actual impairment. This has resulted in some variance in the legal level in different jurisdictions.

§ In most of the United States, the legal limit is over 100 milligrams

§ In Sweden and other European jurisdictions, two legal levels are set. A reading over 50 milligrams is treated as a relatively minor offence, while a reading over 150 milligrams carries a jail sentence

§ In the United Kingdom, the legal limit is over 80 milligrams. This 1967 standard has been reviewed recently and determined to be appropriate.

The problem of setting a standard is that there is no "safe" limit. Even one drink will cause some impairment. A study done for the Ontario Department of Justice in 1967 concluded that a blood alcohol content as low as 40 milligrams constituted impairment in terms of inability to control a car effectively. On the other hand, drinking and driving as separate activities are both deeply embedded in the Ontario way of life. It

seems inconceivable to try by legislation to prevent any combining of the two activities. In addition, since impaired driving is a serious offence under the Criminal Code, it cannot be dealt with as simply as a speeding violation. The Ministry of the Solicitor General estimates that at least seven hours of police time are required to clear an impaired driving charge. At current levels, 50,000 drivers are already charged per year. The police, the courts and the jails could not accommodate the vast increase in charges that might be laid if the legal limit were reduced. And the public would probably not accept severe penalties for driving at levels of impairment that many people consider "reasonable". Therefore, the Committee is not recommending a decrease in the legal limit.

Setting an Enforceable "Safe" Limit

There is a considerable difference between a "safe" limit and the "legal" limit. Our roads would be safer if people did not exceed that "safe" limit. The Committee sought a new approach for Ontario that would reduce driving by persons who had exceeded the "safe" limit but would not require the imposition of all the legal processes and sanctions that must be invoked when the "legal" limit is exceeded.

The Committee found an attractive approach in the 24-hour licence suspension system used in Alberta and British Columbia. The main feature of their system is that police are empowered to suspend for 24 hours the licence of a driver who, in the opinion of the officer at the scene, is not capable of driving safely.

An interministerial committee that studied the 24-hour suspension system in Alberta and British Columbia in 1975 recommended to the Attorney General of this Province that Ontario introduce a similar 24-hour licence suspension program. It recommended that police be empowered to suspend for 24 hours the licences of drivers whom they "reasonably" suspect of having consumed alcohol, drugs, or other substances in such quantity as to effect their physical or mental ability.

The study team found many positive aspects of the 24-hour suspension. Allowing police to exercise greater discretion than they are permitted under existing provisions of the Criminal Code enables them to remove more drinking-drivers from the road before they become involved in accidents. As well, the suspension requires less police time than taking a drinking-driver to a detachment for a mandatory Breathalyzer test, and frees police to continue patrolling the roads. Because it is diversionary

as opposed to penal, avoiding the necessity of processing the drinking-driver, it places less burden on the enforcement system. Finally, it is consistent with research that suggests that the driver is a definite hazard at levels below the legal limit of 80 milligrams, and it enjoys wide public support in both provinces where it has been implemented.

The study team also found some problems. For the driver on the borderline of legal impairment, the 24-hour suspension may weaken the deterrent effect of Criminal Code sanctions. In any event, as many as 50% of persons on 24-hour suspension will continue to drive. And, the system practised in British Columbia and Alberta permits a driver to incur any number of 24-hour suspensions without additional penalty. In addition, the 24-hour suspension may encourage inefficient or lazy police simply to suspend a licence rather than to lay a charge under the Criminal Code when appropriate, further weakening the deterrent effect of current sanctions. The Committee notes an additional problem: this approach could make possible arbitrary and capricious suspension by police.

Since the study was completed, a new portable blood alcohol testing device has become available - the small, battery-operated ALERT unit that can be used by police at the roadside. The ALERT is calibrated with three coloured lights: green for a blood alcohol level of less than 50 milligrams, orange for a level of 50 to 100 milligrams, and red for a level over 100 milligrams. It ensures that a consistent objective standard is applied for the 24-hour suspension and that drivers at the legal limit are detected. Its use overcomes many of the problems pointed out by the interministerial committee and eliminates the possibility of arbitrary suspension.

The 24-hour suspension could be an extremely useful addition to our impaired driving law. It establishes a safe limit when used in conjunction with an effective testing device, and gets the driver off the road without tying up a police officer and bringing the whole enforcement system into play.

Accordingly, the Committee recommends that:

RECOMMENDATION IV-5: THE GOVERNMENT OF ONTARIO SHOULD ENACT LEGISLATION TO EMPOWER THE POLICE TO SUSPEND FOR 24 HOURS THE LICENCE OF A DRIVER WITH A BLOOD ALCOHOL LEVEL OF 50 TO 100 MILLIGRAMS OF ALCOHOL PER 100 MILLILITRES OF BLOOD AS MEASURED ON AN "ALERT" MACHINE. FURTHER, THE ONTARIO PROVINCIAL POLICE SHOULD BE EQUIPPED AND DIRECTED TO ENFORCE THIS NEW LEGISLATION.

REHABILITATION: TAKING EFFECTIVE ACTION WITH CONVICTED OFFENDERS

The Committee was concerned that convicted offenders be dealt with as effectively as possible to minimize the chance that they will become repeat offenders. Relatively few people are convicted more than once under the drinking-driving laws in Ontario. Most evidence suggests, however, that this is primarily due to the low probability of being caught at any time and the failure to identify all second offenders. It is believed that drivers convicted of driving while impaired (DWI) do repeat the offence.

In developing a more effective approach to DWI offenders, the Committee has drawn heavily on the extensive work that has been done in the United States under the federally funded Alcohol Safety Action Projects. This work is generally considered the most sophisticated undertaken in the area. Many of the ideas for rehabilitating DWI offenders that were tested have failed, but three important findings have emerged that can guide Ontario towards a comprehensive effective approach.

1. Punishment is an ineffective method of dealing with the majority of offenders. In the public hearings, the Committee found that there were two commonly held views of the drinking driver. One view is that the drinking driver is basically an irresponsible person who will only respond to more severe punishments - usually involving mandatory jail sentences. The other widely held view is that the drinking driver is usually "just one of us" who slipped, was unlucky enough to be caught, and deserves a heavy fine to ensure that it will happen again. Both views are essentially incorrect.

§ One-half to two-thirds of convicted offenders in the ASAP programs are "problem drinkers" or alcoholics who, in most cases, have little control over their drinking.

Usually, heavy and uncontrolled drinking is a way of dealing with a background of family, financial, health and business or job problems that are - in the mind of the problem drinker - so pressing that the prospect of a fine, licence suspension or jail sentence if apprehended has little impact

§ Only the social drinker, constituting about one-third of all DWI offenders, responds to traditional punishments in the sense of being deterred from driving in an impaired condition.

2. Rehabilitation can reduce the incidence of repeat offences and/or alcohol-related collisions, but the methods used with the two groups must be different.

§ Social drinkers respond to an educative approach, usually in a classroom lecture format, that stresses the potential consequences of driving while impaired

§ Problem drinkers respond to personalized therapy that extends over a period of several weeks or longer.

Application of the classroom lecture format to problem drinkers has produced negative results: the problem drinkers are more likely to repeat. Success rates vary from 20% to 80% depending on the type of program and its matching with the problem drinker's needs. Social drinkers do not have a negative reaction to therapy, but the treatment is unnecessary and the expenditure of scarce community resources is wasted.

3. Reasonably reliable assessments to identify the problem drinkers can be made in about 20 minutes. In the ASAP demonstrations, assessments were made after conviction but before sentencing to stream offenders into the most productive rehabilitative system.

In Ontario, virtually all first-time offenders are treated in a uniform way by the courts. Typically, a first offender receives a fine of about \$200 as well as a three-month suspension of the driver's licence under the provisions of The Highway Traffic Act. A second offender usually receives a jail sentence of 14 days - often served at nights and on weekends - and a six-month suspension of driving privileges. The correctional institutions try to make an assessment of the individual and institute some kind of educational and rehabilitative program for the two weeks of the sentence. Although their resources are limited, they achieve about a 30% success rate in treating problem drinkers. In addition, judges in three centres - Oshawa, Waterloo and North Bay - can send second offenders to an experimental educational rehabilitation program being offered by the Addiction Research Foundation. No concrete evaluation of the program is available as yet.

The Committee believes that the knowledge is now available to do much more with convicted drinking drivers. Ontario has a great opportunity to take advantage of the multi-million-dollar expenditure of the U.S. government on finding better ways of dealing with drinking-drivers. Problem

drinkers can be identified and successfully treated so that fewer impaired drivers threaten their own lives and those of other road users. Taking action with first-time offenders will give as many as 30,000 problem drinkers a chance at rehabilitation each year. Society will benefit not only in terms of greater road safety but also in a reduction of the human and financial drain of alcoholism.

Accordingly, the committee recommends that:

RECOMMENDATION IV-6: THE GOVERNMENT OF ONTARIO SHOULD ESTABLISH A COMPREHENSIVE PROGRAM FOR DEALING WITH OFFENDERS CONVICTED UNDER THE DRINKING AND DRIVING SECTION OF THE CRIMINAL CODE. THIS PROGRAM WOULD HAVE THE FOLLOWING COMPONENTS:

1. A PRE-SENTENCE INVESTIGATION OF CONVICTED OFFENDERS TO GUIDE IN RENDERING THE MOST APPROPRIATE SENTENCE
2. A COMPULSORY EDUCATIONAL PROGRAM FOR ALL CONVICTED OFFENDERS ASSESSED TO HAVE CONTROL OF THEIR DRINKING BEHAVIOUR
3. A SET OF COMPULSORY TREATMENT ALTERNATIVES TAILORED TO THE NEEDS OF CONVICTED OFFENDERS ASSESSED TO LACK CONTROL OF THEIR DRINKING BEHAVIOUR.

(Exhibit IV-6 shows how the new scheme recommended by the Committee replaces the current blunt approach with more selective, specifically targetted intervention.)

It must be observed, however, that the United States has not learned everything there is to be known about drinking and driving offenders or about alcoholism. There is more to be done. And the problems of co-ordinating a wide variety of agencies funded and operated on many different bases by several ministries will be formidable. Achievement of worthwhile results will require careful management evaluation and appraisal.

Accordingly, the Committee recommends that:

RECOMMENDATION IV-7: THE GOVERNMENT OF ONTARIO SHOULD ENSURE THAT IN IMPLEMENTING THE NEW PROGRAM FOR OFFENDERS CONVICTED OF DRINKING-DRIVING OFFENCES, ADEQUATE ATTENTION AND FUNDING IS DEVOTED TO CONTINUOUS EVALUATION AND REAPPRAISAL OF ALL ASPECTS OF THE PROGRAM.

Dissent: Mr. Mike Breagh (Oshawa) on Recommendation IV-3

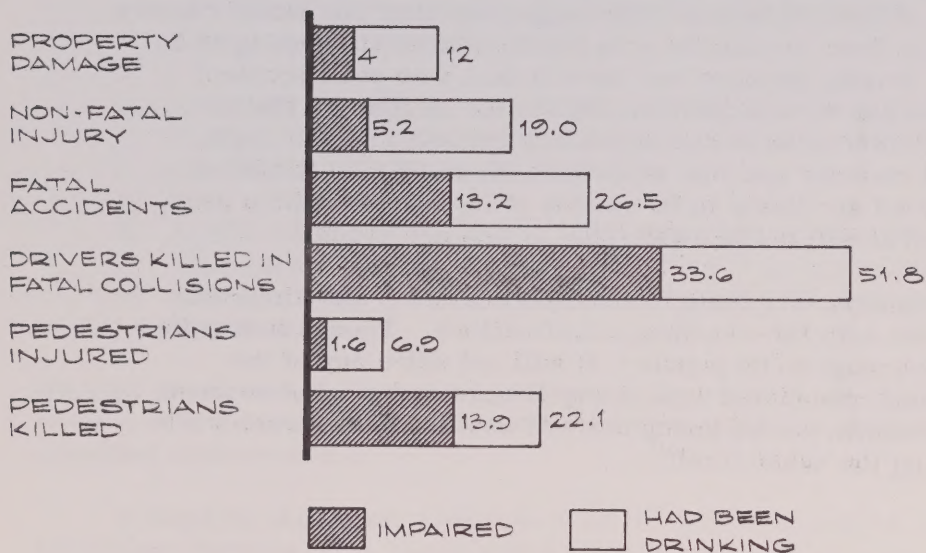
"Of the seven recommendations dealing with the very serious problem of impaired drivers, I can agree with six proposals which attempt to identify these individuals who break the law and propose solutions to correct the problem. However, the idea of classifying all 18-year-olds as offenders is both unfair and unwise. It is also beyond the terms of reference of this Committee to recommend such a change which would remove several other rights and privileges for an entire age group.

"Evidence gathered on this age group is still not conclusive in terms of driving habits. The suggestion that this would remove drinking from secondary schools has absolutely nothing to do with a driving problem nor does it deal with peak accident periods nor even drivers in any sense. It ignores the fact that 19-year-olds in our secondary schools are also high school students and that occasions where alcohol would be consumed are likely to be outside of the schools with a peer group that will not be restricted to this age group.

"In summary, this recommendation is a naive and simplistic proposal with far-reaching ramifications. Though it may be catchy enough to be popular, it will not solve any of the problems associated with young drivers and alcohol because it chooses to tar all young drivers with the same brush while ignoring the cause itself".

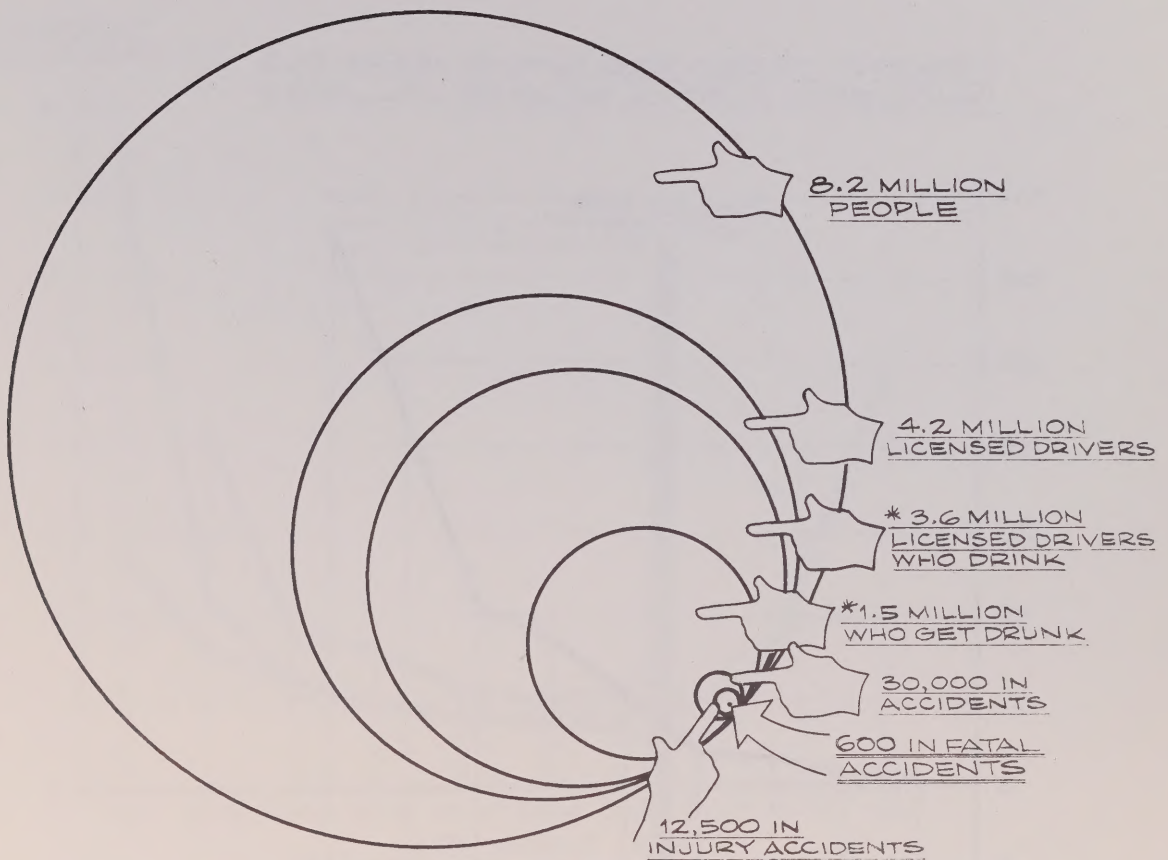
ALCOHOL IS A SIGNIFICANT FACTOR IN THE MOST SERIOUS
ACCIDENTS WHERE SOMEONE IS KILLED OR INJURED

PERCENT OF ACCIDENTS BY TYPE IN WHICH
ONE OR MORE DRIVERS WERE IMPAIRED
OR HAD BEEN DRINKING



SOURCE - TESTIMONY OF ONTARIO PROVINCIAL POLICE, JAN. 25, 1977,
MOTOR VEHICLE ACCIDENT FACTS, 1975

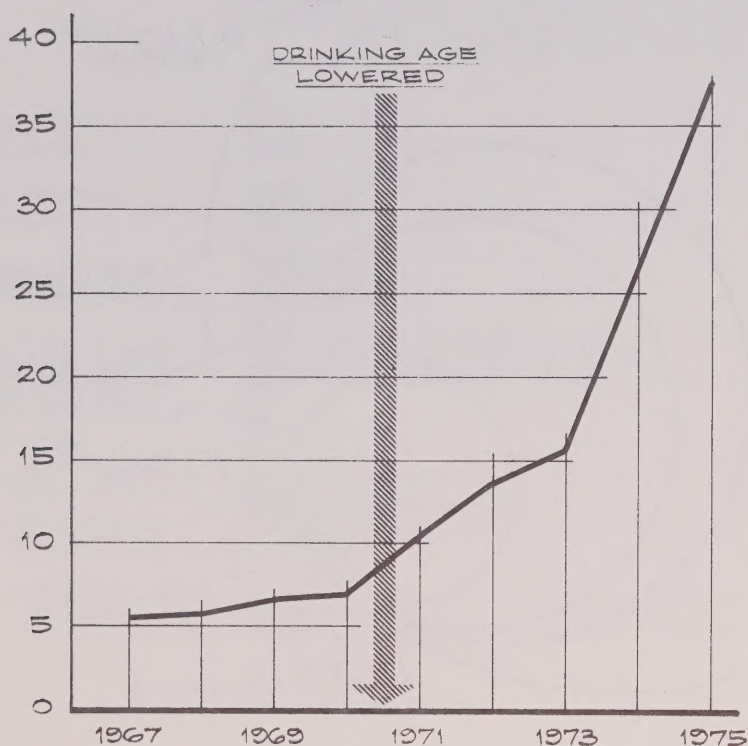
THE OVERALL PREVALENCE OF ALCOHOL IN ONTARIO DWARFS
ITS INVOLVEMENT IN HIGHWAY SAFETY



* STAFF ESTIMATES

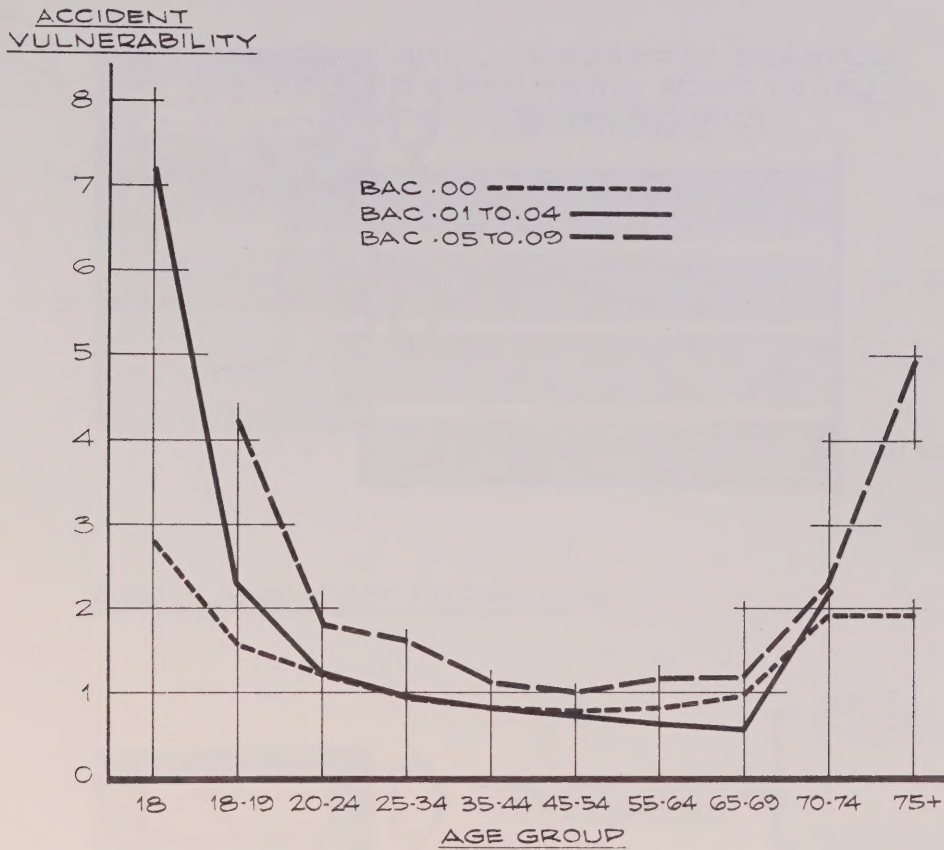
THE INVOLVEMENT OF TEENAGERS IN DRINKING AND DRIVING ACCIDENTS HAS JUMPED DRAMATICALLY SINCE THE DRINKING AGE WAS LOWERED

PERCENT OF DRIVERS 16 TO 19 YEARS OLD INVOLVED IN ALCOHOL RELATED COLLISION



SOURCE - ONTARIO YOUTH SECRETARIAT, YOUTH & ALCOHOL, APRIL 1, 1976
ONTARIO PROVINCIAL POLICE

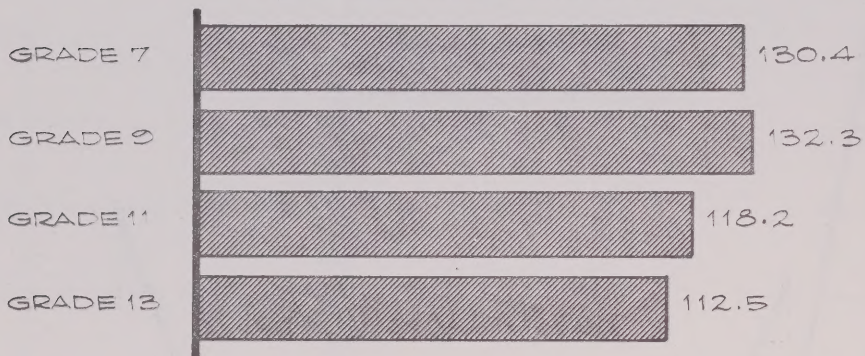
EVEN SMALL AMOUNTS OF ALCOHOL DRAMATICALLY INCREASE
THE VULNERABILITY OF TEENAGERS



SOURCE - ALCOHOL, DRUGS AND YOUNG DRIVERS, PREPARED BY
TRAFFIC SAFETY PROGRAM, NHTSA, WASHINGTON

TEENAGERS ARE DRINKING AT A MUCH YOUNGER AGE SINCE THE
DRINKING AGE WAS LOWERED

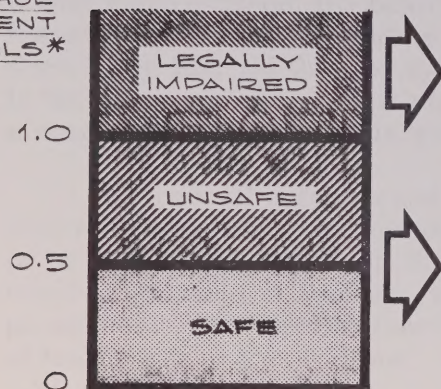
INCREASE IN PERCENT USING ALCOHOL
AT LEAST ONCE IN THE PAST SIX MONTHS
1974 COMPARED TO 1970



THE RECOMMENDED APPROACH TO DRINKING/DRIVING SHOULD REPLACE THE CURRENT ONE WITH A RANGE OF MORE SELECTIVE INTERVENTIONS

CURRENT APPROACH

BLOOD
ALCOHOL
CONTENT
LEVELS*



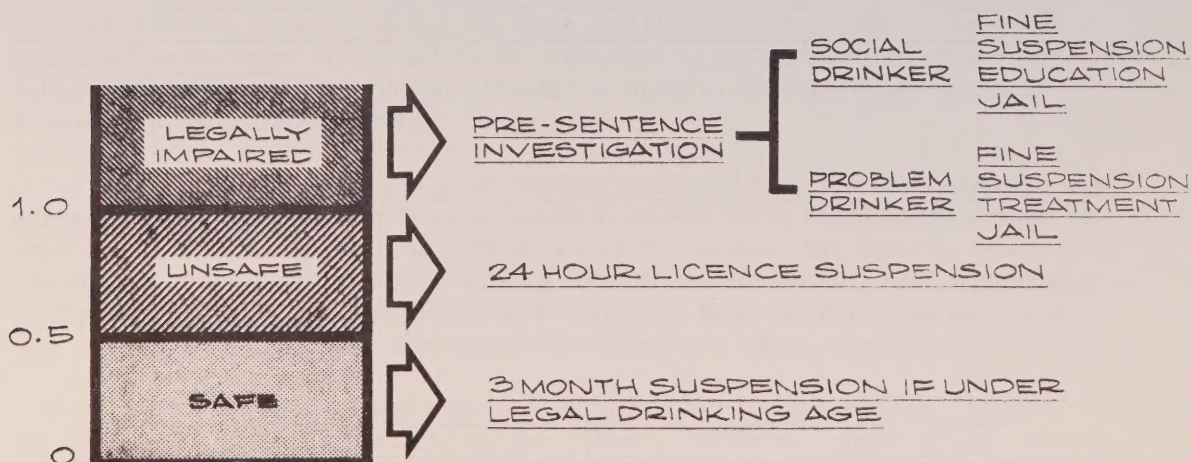
AUTOMATIC
SENTENCES

ACTION
TAKEN

FINE
SUSPENSION
JAIL

NO ACTION

RECOMMENDED APPROACH



* MILLIGRAMS OF ALCOHOL PER MILLILITRE OF BLOOD

SECTION V

THE ENFORCEMENT SYSTEM

The Committee often heard from the public that the most effective road safety measure would be "more enforcement of our current laws". It was apparent from the public's comments that "more enforcement" meant the police apprehending more drivers for traffic violations. The Committee learned that the system for the enforcement of traffic law is far more complex than it may at first appear and its effectiveness as a road safety measure is largely unknown.

The overall enforcement system comprises four separate but interactive components: the legislation or the laws themselves; the sanctions or penalties being applied; the police and their responsibility for apprehending violators of the law; and, the courts and their related adjudicative processes. The specific functions of these components in the enforcement of traffic law are as follows:

1. The laws and regulations governing driver behaviour on the roads are the foundation of the traffic law enforcement system. Legislation that improves road safety will be targetted specifically at unsafe behaviour (such as driving too fast for the type of road, or failing to stop at an appropriate signal).
2. The sanctions or penalties applied against violators are intended to deter drivers from breaking the laws and to discourage the recurrence of illegal behaviour. Road safety is improved to the extent that behaviour defined by legislation as illegal actually is unsafe, and the deterrence or discouragement are effective.
3. The police have the most visible and vital function in the traffic law enforcement system. Their main function should be to manipulate driver behaviour - persuading the majority of the public to obey the laws by being a visible presence on the roads, helping to educate the public, and intervening in illegal behaviour by apprehending violators. Road safety is enhanced if this police "manipulation" makes people drive in a safer manner.
4. The function of the courts is to interpret the legislation, assess the evidence presented (usually by the police), determine guilt or innocence, and impose the appropriate sanction within the limits defined by the legislation. The courts ensure that the enforcement system is seen to be fair by

allowing some subjectivity and variability to enter the system where appropriate. The courts enhance road safety to the extent that they reinforce the other parts of the system, and the "fairness" of the adjudication process contributes to public acceptance of laws governing unsafe behaviour.

Ideally, each component of the traffic law enforcement system builds upon the others, and is in turn dependent upon them to improve road safety. The corollary, however, is equally valid. Each part of the system can reduce the effectiveness of the others; each part can operate in a way that does not contribute to road safety. Legislation can be passed that is unpopular, unenforceable and unrelated to specific safety concerns. Penalties can be inappropriate: too severe to be considered "fair" or not severe enough to deter or discourage illegal behaviour. The police can maintain a low visibility and concentrate their attention on driving behaviour that may be illegal but is not really unsafe. The courts can fail to uphold the law or can operate in such a way that the public believes there is no "fairness" in the system.

This section of the report presents the Committee's conclusions and recommendations on this complex and interrelated system. The first two parts of this section will concentrate on the two components of the system where the Committee believes action should be taken: the police, who should make road safety a more explicit part of their activity, and the courts, where the adjudicative process should be improved. The third part of this section considers the interaction of the components and the need for coordination.

INCREASING POLICE EFFECTIVENESS

The police in our society perform a great number of essential functions from apprehending dangerous criminals to finding lost children. Their activities in traffic are only one part of this range of functions. And, within the traffic area, there is a wide range of essential functions that include directing traffic, assisting motorists in distress, investigating accidents, and apprehending violators of traffic laws. The Committee believes that the police can be more effective in improving traffic safety. But the Committee makes its recommendations in this area in full recognition of the many demands that society places on the police. Ontario is fortunate to have such excellent police forces at both the provincial and municipal levels.

Since apprehension of violators is the traditional function of the police in enforcing the traffic law, this is regarded by most people as their main contribution to road safety. However, apprehending violators is an effective safety measure only if the violations are likely to contribute to accidents. For example, a hidden radar trap on a straight stretch of road with no intersections and little traffic is likely to produce a large number of convictions. It may do little for road safety. In fact, if the police were to accept as their primary road safety function that of manipulating the behaviour of drivers to make them act in a safer manner, there would, very likely, be fewer convictions but fewer accidents as well. To manipulate driver behaviour effectively, the police must, in addition to apprehending violators, be a visible presence on the road.

Many studies have shown the impact that a visible police presence can have on traffic safety. A visible indication of police enforcement creates what is known as a "halo" of safe behaviour. For example, merely parking a marked police cruiser by the side of the road reduces accidents and violations in an area extending anywhere from a few hundred yards to several miles on either side of the cruiser. The Ontario Provincial Police (OPP) are well aware of this phenomenon. They have found, for example, that an aircraft patrol can reduce fatal and personal injury collisions in the area of the patrol. One of the major objectives of their detachment planning process is to keep as many officers in accident-prone locations as possible.

Nevertheless, policing of the roads can be improved in four ways: achieving maximum benefit from selective enforcement; ensuring that the police are properly equipped; allowing the use of remote surveillance equipment; and, reducing the ability of motorists to evade the police.

Achieving Maximum Benefit From Selective Enforcement

In a vast province with thousands of miles of road and millions of registered vehicles, it is hardly possible to field enough police to ensure that traffic law violators will always be apprehended. The police must deploy their scarce resources in the most effective manner. The main technique for effectively deploying scarce police resources on the roads is known as selective enforcement. Police are assigned to work in relation to the distribution of traffic accidents by time and place, and to concentrate on accident-causing offences. The approach can be based on sophisticated statistical analyses or ordinary accident maps.

The Ontario Provincial Police endorse the concept of selective enforcement. They advised the Committee that "the system of selective traffic enforcement permits us to use what personnel we have in a manner best designed to reduce collisions and save lives". The planning process of many detachments involves the officers who are actually on patrol in the selection of the high-priority areas for enforcement and the working out of patrolling patterns that put police officers in the accident-prone locations.

The Committee was concerned, however, that the OPP may not be putting the concept of selective enforcement into practice as effectively as possible. Several facts led the Committee to this concern: the lack of information on high-risk violations; the relative infrequency of weekend evening stop checks; and the low priority given to equipping the police to enforce the impaired driving laws.

§ The OPP were unable to identify the high-risk violations. An essential element of any selective enforcement programs is the identification of violations that are more dangerous than others. Selective enforcement can then be concentrated on the highest-risk offences, whether they be speeding or driving too slowly. It is evident that if these violations have not been properly identified, police are unable to concentrate on actions specifically designed to reduce them

§ Inadequate enforcement directed at the weekend drinking problem. In Section IV of the report, the Committee noted that the combination of alcohol and driving constitutes the most serious problem in road safety. It is well established that weekends are the worst time for drinking and driving. If the OPP and other forces were following the dictates of a well-rationalized selective enforcement system, maximum attention would be given to the impaired driver. Yet while it is known, for example, that more impaired drivers are on the road on weekend evenings than at other times, there is little concrete evidence of an increased visible police presence at these times, except in some urban areas in December

§ The police are not adequately equipped to enforce the impaired driving laws. Because the drinking driver is such a significant hazard on the road, the laws, penalties and court processes relating to impaired driving are very strict. They all depend, however, on the police apprehending the impaired driver and administering a

Breathalyzer test. The Criminal Code was recently revised to make apprehension more certain by permitting the police officer to use a roadside screening device - the ALERT breath tester. However, the OPP are short more than 100 Breathalyzers and are officially "neutral" on the use of the ALERT. There are in fact very few ALERT machines in the Province. The failure of the authorities to use these enforcement devices is indicative of a weakness in the selective enforcement program.

Dr. Charles Livingston of the U.S. National Highway Traffic Safety Administration in Washington observed of the potential of selective enforcement and the problem of maximizing its contribution to road safety that:

"It can unquestionably do the job. It can impact violations that contribute to crashes. You can see a reduction in the crashes, and in the violations that are crash-contributing, if an agency has data, identifies where the crash occurrences or their high-risk areas are, and implements a well-structured and designed program. But that takes effort, it takes resources, and it takes a dedication on the part of the supervisory chain in any enforcement agency to want to achieve that".

Ontario police have taken the first step by accepting the concept of selective enforcement. A successful program requires a commitment at all levels in the police forces throughout the Province. Finally, selective enforcement requires a rigorous management approach, or its full potential will remain unfulfilled.

Accordingly, the Committee recommends that:

RECOMMENDATION V-1: THE GOVERNMENT OF ONTARIO SHOULD CAREFULLY EVALUATE THE ENFORCEMENT POLICIES AND PRACTICES AIMED AT ROAD SAFETY NOW BEING USED BY POLICE FORCES IN ONTARIO WITH A VIEW TO ENCOURAGING THE INTRODUCTION OF A MORE RIGOROUS SELECTIVE ENFORCEMENT PROGRAM AT THE EARLIEST POSSIBLE DATE.

Ensuring the Police are Properly Equipped

It is unnecessary to wait for the results of the recommended evaluation of current enforcement practices to conclude that a selective enforcement program will not work unless the police have the equipment necessary to

ensure they can enforce the law. As noted above, the OPP require a minimum of 100 additional BreathAlyzers and are making little or no effort to utilize the ALERT devices. For the laws to be respected, the police must enforce them properly. In addition, the ALERT device is required to enforce the Committee's proposed 24-hour licence suspension. It will be particularly important that Ontario police are properly equipped when the well-rationalized selective enforcement system is initiated.

Accordingly, the Committee recommends that:

RECOMMENDATION V-2: THE GOVERNMENT OF ONTARIO SHOULD ENSURE THAT ALL OPP DETACHMENTS ARE PROPERLY EQUIPPED TO ENFORCE CURRENT LAWS AND, IN PARTICULAR, THAT EACH DETACHMENT BE EQUIPPED WITH A BREATHALYZER.

Allowing The Use of Remote Surveillance Equipment

Improved selective enforcement techniques and proper equipment help the police to make the most effective use of their capabilities. However, there will always be manpower limitations that make enforcement approaches requiring less manpower very attractive. One approach that has proved to be successful is the remote, automatic recording device - either a camera or video tape.

At the conclusion of the Committee's investigative trip to Europe, the Chairman investigated for the Committee the use of cameras linked to radar in Switzerland and West Germany. A very high-powered camera is aimed at a particular stretch of the road. If a passing car is travelling in excess of posted speed limits (plus the usual margin of a few miles per hour) the radar activates the camera. A very high-quality photograph is taken that clearly shows the rear of the vehicle and its licence plate, as well as the reading on the radar machine and the time of the offence. The camera is cleared several times a day, the film developed and the picture sent off within a few days to the owner of the vehicle. The owner of the vehicle is responsible for ensuring that the citation is conveyed to the responsible driver.

Most often, the cameras are used only in particularly dangerous or heavily travelled locations. They are mounted in prominently marked, well-posted boxes at the side of the highway or above it. There is no

attempt to hide them. Primarily because of the expense of the equipment, more boxes than cameras are installed along the highways.

The Europeans have found that the camera system works: speeding is reduced and there are fewer accidents. Motorists do slow down in the dangerous areas around the camera boxes. Some drivers ignore the cameras and are sent citations. However, the presence of the camera is a sufficient deterrent to speeding that accidents are significantly reduced.

Using the remote surveillance devices in Ontario would require a change in The Highway Traffic Act. Police must be able to "ticket" the owner rather than the driver of the vehicle. A rebuttable presumption of guilt would be imposed on the driver.

The Committee is aware of the serious consequences of such a charge in the current law. Dr. Kent Joscelyn, a lawyer and international expert on traffic law enforcement with the Highway Safety Research Institute of the University of Michigan, was queried on this particular issue. He was convinced of the overriding value of extending the visible presence of the police.

"The . . . studies that are available that attempt to show what does work in the field, show that police presence, direct or indirect, has great impact on traffic behaviour. The camera system . . . is an example of enforcement presence and it has been shown to influence driver behaviour . . . I would urge very strongly legislation that would facilitate enforcement, in particular that would allow for citation of an owner or lessee of a vehicle for a number of offences".

The Committee is convinced that the actual presence of police on the highways must be supplemented by additional means in enforcement. The use of remote surveillance devices will aid greatly in this respect. The Committee is aware that there must be appropriate safeguards to prevent the kinds of abuses that led to legislation requiring police to stop traffic law violators and "ticket" drivers.

Accordingly, the Committee recommends that:

RECOMMENDATION V-3: THE GOVERNMENT OF ONTARIO SHOULD INSTALL REMOTE, RADAR-CONTROLLED, SPEED-MEASURING CAMERAS AND "DUMMY" CAMERAS ON DANGEROUS STRETCHES OF ROAD.

RECOMMENDATION V-4: THE GOVERNMENT OF ONTARIO SHOULD ENACT LEGISLATION ALLOWING THE REGISTERED OWNER OF A VEHICLE TO BE "TICKETED" FOR SPECIFIED OFFENCES WHEN IDENTIFIED BY THE HIGHLY VISIBLE REMOTE CAMERAS.

Reducing Evasion of Police Enforcement

The Committee has emphasized the importance of a police presence and the public perception that violations of highway traffic laws will result in apprehension. If drivers believe that they can violate the laws with relative impunity, the police presence is negated. Radar detection devices such as "fuzz busters" allow drivers to ignore speed limits by allowing them to slow down in time to avoid apprehension. In the view of the Committee, these devices foster disrespect of the law and encourage driver behaviour that increases the risk of serious accidents.

Accordingly, the Committee recommends that:

RECOMMENDATION V-5: THE GOVERNMENT OF ONTARIO SHOULD ENACT LEGISLATION AT THE EARLIEST POSSIBLE MOMENT TO BAN THE SALE AND THE INSTALLATION AND USE OF ALL RADAR DETECTION DEVICES IN ALL MOTOR VEHICLES.

IMPROVING THE ADJUDICATIVE PROCESS

Most traffic laws stipulate very explicit and non-discretionary penalties for violations. In most cases, the violation is clear-cut: the radar shows the vehicle to be travelling at a particular speed that is either over or under the legal limit. Therefore, the primary function of the courts and the adjudicative process in traffic law enforcement is to provide a sense of fairness to the overall enforcement system. The aggrieved motorists must be able to present his case somewhere and get a fair hearing. Despite the fact that most convictions do not require a court appearance, many people do appear in court to argue their innocence. In Ontario, traffic and parking offences are infinitely more important to the courts in terms of workload and administrative burden than the administration of justice in serious criminal offences.

To fulfill their primary "fairness" function, the courts must be capable of providing the accused driver with a full opportunity to present a defence. If the court is so full that the magistrate cannot spend adequate time hearing a case, then the accused may feel that the process is unfair. If the court times are inconvenient or are too far removed from the date of the offence, then the motorist may pay the fine without fully relating the sanction to the offence and may develop a sense of injustice. If the court is so blocked and inefficient that police fail to appear as witnesses, then the defendant can be acquitted but be left with a feeling of disrespect for the law.

The Ontario Law Reform Commission Report in 1973 warned that the court system was, in fact, at the point of collapse.

"The whole system of administration of provincial offences is collapsing, not only in court but also with respect to the service of summons, execution of warrants and the vast amount of related paperwork. Police resources are being used to enforce parking tags while subpoenas and serious cases are being sent by ordinary mail. Some police officers do not bother to attend as witnesses. Defendants are acquitted apart from the merits. The latter result may be unobjectionable if some other desirable purpose is served, but if acquitted is simply the consequence of administrative incapacity, it can only encourage disrespect for the system".

The Government has recognized the problems in the court system and is taking steps to improve the situation. There is a general approach of "de-criminalizing" minor offences in order to deal with them more informally and therefore more quickly and cheaply.

It is essential that the effect of the penalties for minor traffic violations is not lost in the process of alleviating the burden of both the courts and the police. The Committee therefore endorses in principle two proposals recently advanced by the provincial Attorney General. He indicated that legislation may be introduced that would prevent drivers with unpaid traffic fines from either renewing their driving licences or obtaining new car licence plates. As well, he suggested that licence plates stay with a car owner rather than follow the vehicle. The Committee considers that these measures will enhance considerably the sanction component for minor traffic offences by ensuring that once apprehended, violators will be less able to ignore the sanctions imposed by the system. A system whereby drivers with unpaid fines are unable to obtain a licence would also, as stated in a background report to the Ministry of the Attorney General's annual report, "essentially take the police out of the debt-collecting business".

The Committee agrees that tying licence plates to the owner rather than the vehicle would make denial of registration even more effective and would allow the plate number to serve as a highly visible method of identification.

An experiment that bears directly on the need to improve the adjudicative process is the North York Traffic Tribunal, which has the basic aim of removing minor traffic offences from the standard court system. An accused is notified that there are four daily court times, any of which he is free to attend. Rather than being limited to guilty or not guilty, the driver may plead guilty with explanation. The police evidence is presented as a report from the police officers, who need not attend. A presiding Justice of the Peace has been given discretionary power to reduce the minimum fine and may suggest that the individual attend, on a voluntary basis, a driver improvement course offered in the same building.

The North York Traffic Tribunal appears to be alleviating many of the problems of the traditional approach to minor traffic offences. In allowing the accused to choose the time of his appearance it has minimized wasted manpower hours caused by "no shows". Its informality is in keeping with the minor nature of most charges and allows the magistrate more leeway in disposing of the charge. The accused is not "let off" just because the police officer fails to appear. It offers the possibility of becoming a forum for the dissemination of information in areas of concern such as drinking-driving. And, it has received positive response from both the police and the public.

The North York experiment involves many important concepts. While it is too early to declare it an unqualified success, preliminary indications are that there have been fewer repeat offenders in North York than in jurisdictions where the accused pass through the regular court system. In any event, the North York Traffic Tribunal experiment is an important step.

Accordingly, the Committee recommends that:

RECOMMENDATION V-6: THE GOVERNMENT OF ONTARIO
SHOULD BUILD ON THE TRAFFIC TRIBUNAL CONCEPT BY:

- CAREFULLY EVALUATING AND MONITORING THE
CONTINUING RESULTS OF THE NORTH YORK TRAFFIC
TRIBUNAL
- BREAKING DOWN THE COMPONENTS OF THE NORTH
YORK SYSTEM TO DETERMINE THE EFFECT OF EACH
PART

- SPREADING THE TRIBUNAL SYSTEM ACROSS THE PROVINCE BASED ON THE INFORMATION GATHERED IN NORTH YORK.

COORDINATING THE TRAFFIC LAW ENFORCEMENT SYSTEM

For the traffic law enforcement system to be effective, it is essential that each of its components be viewed as part of an interrelated whole. It is apparent that if any component of the system proceeds without regard for the rest, inefficiencies will result. Yet the enforcement system lacks overall management and systematic coordination. The responsibilities of each component of the system are diverse. None is devoted solely to traffic safety. Each independently sets priorities and allocates resources. Decisions are often made without due regard for their impact on the system as a whole. As Dr. Joscelyn stated:

"Nobody is in charge. It is a complex system of units that answer to themselves or at least to separate masters".

Lack of coordination has, for example, lessened the impact of several recent safety-related programs.

§ Passage of a mandatory seat-belt usage law in Ontario was preceded by a persuasive media campaign, and usage rates climbed dramatically immediately after its enactment. Shortly after the introduction of the law, however, the media campaign was reduced considerably. The failure of police to apprehend violators of the law coupled with the "one-shot" nature of the media campaign resulted in a consistent decline in usage rates. There is no evidence that the decline will be reversed

§ The Ontario report on the Alberta "check-stop" system concluded that a major stumbling block to its success was the lack of total police cooperation. This lack of cooperation was attributed to the fact that police forces had not been consulted prior to the introduction of the system and had received neither additional manpower nor specific training to implement the law.

On the other hand, where the various parts of the system work together, traffic laws can change driver behaviour.

§ Speed limits were reduced on most highways in the Province last year. The law was clear. After leaving some time for motorists to adjust, the OPP targetted their enforcement campaign at speeding. Media advertising reminded the public of the new speed limits. Newspaper stories reported the high level of enforcement. Regular speed surveys taken over the Province showed that drivers responded: average speeds came down, and excessive speeding was reduced.

The success of this integrated approach also points out another advantage of a managed, coordinated system. The combination of a vigorous advertising campaign and appropriate police action with laws and penalties the public considers reasonable and the courts will enforce can have a significant effect.

§ The most famous example is the British Road Safety Legislation (essentially the precursor of our impaired driving laws). The new legislation was introduced with a great deal of advertising and press coverage that contributed to public acceptance of the sanctions, police commitment to their enforcement and court reinforcement of the penalties. Both the advertising and press coverage were ongoing. This legislation had the most dramatic and lasting impact on traffic fatalities of any traffic legislation ever passed

§ The stop-check program to control impaired driving during the Christmas/New Year season conducted by Metropolitan Toronto police receives extensive press coverage. The idea of saving lives at the Christmas season has great public acceptance, and the results are very favourable. There are relatively few convictions for impaired driving (the biggest single offence is driving without a licence), but fatalities decline. It is believed that there are, in fact, fewer impaired drivers on the road at night.

The traffic law enforcement system can be made more effective. There is a basic need for a comprehensive system-wide management approach. In Section X the need for management of the complete highway safety system will be discussed. Regardless of the overall management approach adopted, specific management of the traffic law enforcement system is needed.

Accordingly, the Committee recommends that:

RECOMMENDATION V-7: THE GOVERNMENT OF ONTARIO SHOULD GIVE ONE OF THE ENFORCEMENT AGENCIES THE RESPONSIBILITY FOR COORDINATING THE TRAFFIC LAW ENFORCEMENT SYSTEM.

Dissent: Mr. Mike Breagh (Oshawa) on Recommendation V-4:

"This recommendation would move enforcement back to the previous era where apprehension of a law-breaker was abandoned in favour of the gathering of revenue. The aspect of 'Big Brother is Watching' is revolting but, more important, there will be no effort at apprehension only conviction. The aspect of civil liberties is also a concern. This proposal assumes guilt and requires a driver, who may or may not have even been at the scene of the offence, to prove his innocence".

SECTION VI

THE AUTOMOBILE

Very early in its deliberations, the Committee began to focus its attention on driver error because motor vehicle defects supposedly account for only 5% of all accidents. The Committee devoted a good deal of attention to ways of improving the performance of drivers through training, testing and licensing, impaired driver control and enforcement. Recommendations in each of these areas are set out in the preceding four sections. However, a balanced approach to highway safety must include careful consideration of ways to improve the safety of the vehicles using the road, for at least three reasons. First, vehicular factors may play a greater part in accident causation than the Committee had originally been led to believe. Second, physical engineering can actually change the vehicle; social engineering can only try to influence people. And third, changes in vehicle design can minimize the personal and financial consequences of accidents, however they are caused.

Estimates that vehicular failures are responsible for only about 5% of collisions typically come from analysis of police accident reports. It is, however, very difficult for a police officer to make a thorough mechanical assessment of every vehicle in every accident investigated. As a result, several jurisdictions have commissioned detailed multi-disciplinary accident investigation studies to provide a more thorough basis for evaluating accident causation. The findings of these studies are that:

- § Accidents are usually caused by the coincidence of several factors
- § Defects or inadequacies of the vehicle in combination with other factors cause accidents more frequently than single defects or inadequacies.

For example, the most important North American study of accidents, conducted in 1973 by the National Highway Traffic Safety Administration, found on analyzing 999 randomly chosen accidents in Monroe County, Indiana, that vehicle defects were the definite cause of 6% and the probable cause of another 10% of the accidents investigated. A more recent study by the NHTSA estimated that vehicle defects definitely caused 6% of accidents, probably caused 15.9%, and possibly caused 25.8%, for a total societal loss in the U.S. of between \$1.6 billion and \$4.3 billion per year.

Ralph Nader is probably the most outspoken advocate of improving vehicles simply because vehicles can be improved. In a review of the past ten years of automobile safety legislation, he stated:

"Industry and its captive safety councils bombarded public consciousness into believing that bad drivers were the cause and good drivers the solution. Not only was their approach unscientific regarding drivers, but it conveniently drew attention away from the already available or easily realized innovations that could be incorporated into vehicle and highway design to minimize the likelihood of a crash and to reduce the severity of injuries if a crash should occur".

There is some debate about how "easily realizable" the design innovations are, but increased safety is attainable both for new vehicles and for those already in use. Vehicles can be improved so that they cause fewer accidents, so that they make it easier for drivers to avoid accidents and so that they minimize the consequences of the accidents that do occur. By and large, the improvements in the design of both new vehicle structure and equipment have been targetted at minimizing personal injury and property damage from accidents when they occur. The thrust of vehicle-in-use programs is to reduce accidents by ensuring that vehicles are maintained at an acceptably high standard through checks of safety components such as brakes, steering and suspension.

This report discusses and makes recommendations for changes in three kinds of vehicles. This section focusses on passenger cars; the next two sections deal with school buses and heavy trucks.

MAKING NEW VEHICLES SAFER

Occupants of motor vehicles sustain injury and die in crashes during the "second collision", the contact of the driver or passenger with the interior of the vehicle, each other, or the area surrounding the collision. The basic approach to reducing death and injury is to spread out the impact and decrease the rate of deceleration of the second collision so that human injury thresholds are not exceeded. As shown in Exhibit VI-1, the human frame can decelerate from 70 mph to zero without injury in as short a distance as four feet - if properly protected.

The most common kinds of injuries sustained in motor-vehicle accidents, those to the head, chest and abdomen, occur in the second collision with the steering assembly, windshield and windshield area. The thrust of vehicle improvement to date - three-point seat-belts, collapsible steering wheels, padded dashboards, penetration-resistant windshields - has been aimed at these areas. The work of the future is centred on the design of more protective structures. The recent improvements in interior design, the potential for additional improvements and the process of legislating improvements and a role for Ontario are discussed below.

Improving Interior Safety

Many major changes made in the interior design of the vehicle during the 1960s provided extra protection for the occupants, and reduced injuries and fatalities. For example:

- § Energy-absorbing steering columns and dish-shaped steering wheels are estimated to have reduced injury and death to drivers by 5-10%
- § High penetration-resistant glass, which reduces the frequency and extent of dangerous and disfiguring facial injuries, is estimated to have reduced fatalities, perhaps by 5-10%
- § Head restraints and side-door beams have also reduced injury and death.

An authoritative study published in 1970 concluded that the relative decrease in the severity of injuries between 1961 and 1968 was due primarily to improvements in automobile design that were implemented during this period. In 1976, Leon S. Robertson of the Insurance Institute for Highway Safety in Washington estimated that occupant deaths in post-1967 cars, which all bore new safety devices required by federal regulations, averaged 27 per 100,000 registered cars yearly, 23% less than the 1964-1967 models, and 39% less than pre-1964 models.

Of all the improvements in vehicle equipment, the most significant appears to have been the development of protective restraint devices. These restraints are either "active", requiring activation by occupants of a vehicle, or "passive", operating automatically without requiring any action by the occupants. The first such restraints - the lap seat belt and then the separate shoulder harness - were introduced into North American vehicles in the 1960s, followed in the 1970s by the three or four-point belt system. Most seat belts now installed in cars are active restraints, but passive belt systems have been developed that are automatically deployed around the shoulders and lap of the driver and passengers as they enter the vehicle and close the doors. Seat belts minimize damage from the "second collision" with the vehicle in all kinds of accidents, and keep the vehicle occupants from being forcibly ejected onto the roadside. Also, they minimize the collision of occupants of the car with other occupants - a particular concern with children, who may incur serious or fatal injuries when impacted by an adult body.

§ A 1973 study by L.I. Griffin estimated that lap belts have the potential of reducing death or injury to the driver by 40% to 50%, and three-point systems have the potential of reducing death or injury by 50% to 60%

§ More recent studies conducted at the University of North Carolina indicate that the three-point system can reduce severe injuries by 58% in front and front-angle crashes and 62% in side, rear and roll-over crashes

§ A representative of Volvo reported to the Committee that the company's studies in Sweden had failed to identify a single fatality in a collision of any kind below 60 mph where the occupants were wearing their Volvo seat belts.

The Government of Ontario believed that the evidence on the seat belt was sufficiently compelling to make their usage mandatory as of January 1, 1976. Since Ontario took the initiative in Canada, the provinces of Quebec and Nova Scotia have passed similar legislation.

Since Ontario lowered speed limits at the same time as the seat-belt law was implemented, it is difficult to ascertain the exact effect the seat belt law has had on the injury and fatality rates. The Committee noted, however, that in 1976 there were decreases of 16.8% in fatal accidents, 16.1% in persons killed, 11.8% in non-fatal accidents and 13.7% in personal injuries. Property damage only accidents were up 4.2%. The improvement, while encouraging, is significantly less than the Committee believes can be achieved.

The disappointing figures point out the major drawback of most seat belts - they are active restraint systems, and must be activated, or put on - each time the driver or passenger enters the vehicle. In addition, the seat-belt law is not being vigorously enforced. The Ontario public believes quite rightly that there is little risk of being apprehended for not wearing the seat belt. The moral suasion of the law has not been sufficient to maintain high rates of seat-belt usage. MTC's surveys show that seat-belt usage increased from about 30% before passage of the law to nearly 80% shortly thereafter. Usage rates declined during the year to 65% and then to below 60%, suggesting that usage will continue to decline until it is only marginally above the level before the legislation. In Section X, the Committee expresses its concern over the difficulties that arise when a road safety initiative is developed in one ministry but administered in another, or when a problem is a shared concern of several ministries. The Committee believes that Ontario's seat-belt law is a good one and that to make it effective, it must be enforced.

Accordingly, the Committee recommends that:

RECOMMENDATION VI-1: THE ONTARIO POLICE SHOULD PLACE GREATER EMPHASIS ON ENFORCING CURRENT SEAT-BELT LEGISLATION.

Continuing to Improve Vehicle Safety

The major future achievement in vehicle safety is expected to come from the design of more protective vehicle structures and less dangerous vehicle exteriors. For example:

- § Properly engineered, energy-absorbing designs for the front, side, rear and top of the vehicle would greatly reduce impact forces by smoothing out the forces of rapid deceleration, providing greater protection for occupants
- § The roof and side structures of passenger cars can be strengthened to prevent the total collapse of these structures during roll-over or side-impact collisions
- § Vehicle compatibility can be improved by establishing uniform bumper heights that are related as well to the height of side-structure protection. Softer, wider bumpers mounted on smooth, collapsible front ends could reduce pedestrian fatalities.

As North American cars become uniformly smaller in the interest of conserving energy, these structural improvements will become increasingly important. It has been shown conclusively that small cars provide less protection than large cars in crashes (Exhibit VI-2). With this in mind, the U.S. Department of Transportation commissioned Calspan Corporation - a high-technology research firm - to design a safety vehicle based on a small car. Calspan, working primarily with the Chrysler Corporation, produced a small, attractive, relatively fuel-efficient vehicle that is significantly safer for its occupants as well as other road users. The vehicle is capable of protecting properly belted occupants in crashes into a fixed barrier at as much as 50 mph.

The technology is also available to install a passive restraint system that would provide further interior protection and overcome the problem of public resistance to seat belts. This system involves inflatable bags, concealed in the steering wheel and dashboard of the vehicle. Sensors detect a collision or sudden deceleration and activate powerful cylinders of gas. In fractions of a second, the bags inflate to "catch" and cushion drivers and passengers.

Air bag systems have been the subject of vigorous debate over their effectiveness and cost, and remain highly controversial:

§ Detractors claim that air bags, subject to inevitable mechanical failure, will inflate by accident, obstructing the view of the driver and creating the possibility of an accident. Supporters cite evidence of many millions of miles of use by demonstration vehicles without any accidental deployment, and test results that showed no loss of control if an accidental inflation did occur

§ Detractors claim serious hearing damage from the explosion of the gas deployment device. Supporters show, again, that no such problems have occurred in actual and test deployments

§ Detractors claim the systems will cost \$300 per car and cannot be fitted into small cars. Supporters claim full-scale production will cost no more than half that and that workable systems exist that will fit into any North American model

§ Detractors claim the air bag is not effective in roll-over, side-impact or multiple collisions. Supporters agree that air bags are generally most effective in frontal collisions, and point out that these are the most prevalent injury-producing collisions. Further, supporters claim that if used with a lap belt, the air bag systems are very effective in roll-over and multiple collisions, and argue that in any event, they are more effective than no restraint at all - which is the level of protection currently available to the nearly 50% of Ontario drivers who do not wear their seat belts.

Former U.S. Secretary of Transportation William T. Coleman was convinced that air bags are effective and can be produced economically. He accepted the estimate that relatively low-cost air bags would prevent 9,000 fatalities a year in the U.S. and prevent hundreds of thousands of crippling injuries when all cars are equipped. However, he rejected compulsory installation of air bags because he feared a widespread rejection of unfamiliar technology by an uninformed public. The Secretary believed that a compulsory air bag standard would be reversed by the administration or by Congress, resulting in the waste of hundreds of millions of dollars, damage to the nation's economy and a

poisoning of attitudes towards improved occupant restraint systems. Just before the change of administrations, he announced instead a massive participatory demonstration program whereby up to 260,000 passive-equipped vehicles were to be made available to the public each year, beginning with the 1980-81 model year.

The new U.S. Secretary of Transportation, Brock Adams, decided to review his predecessor's decision. The new Secretary contemplated three alternatives: continuation of the mass demonstration program to convince the public that air bags are effective; mandating the installation of air bags or other passive systems; or, federal legislation to induce states to enact mandatory seat belt use laws. He stated that he would take the first approach only if he were satisfied that Secretary Coleman overestimated the savings in lives and injuries or underestimated some of the costs.

In a June 30, 1977 decision, Secretary Adams announced amendments to the existing U.S. safety standards for occupant crash protection that would require provision of passive restraints against frontal crashes in all new standard and luxury cars sold in the U.S. as of the 1982 model year and in all new cars sold by the 1984 model year. In presenting the decision, Secretary Adams endorsed his predecessor's view that the passive restraints would save 9,000 lives annually. He asked participating companies to continue the demonstration program in order to encourage voluntary use of the restraints before their use becomes mandatory.

Among the points cited by Secretary Adams in his decision were:

- § The low rate of usage of active seat belt systems in the U.S., shown by NHTSA studies to be about 20%
- § Increased danger to vehicle occupants in the trend towards smaller cars to improve fuel economy and emissions performance
- § A front air bag installation cost estimate by the Department of Transportation of \$112 per vehicle
- § The apparently poor prospects for passage of mandatory seat belt use laws by more than a few states, and "strong indications that Congress would not enact a belt use program in the foreseeable future".

The decision offered manufacturers the options of providing:

1. Passive protection in frontal modes only, together with lap belts at all seating positions to protect vehicle occupants in side and roll-over crashes
2. Full passive protection for front-seat occupants against side and roll-over as well as frontal crashes; manufacturers achieving this standard would have to provide lap belts only for rear seating positions.

While the decision envisaged that most cars would be equipped with air bags, it held that it is important for passive belt systems to remain available, particularly in the case of smaller-volume manufacturers that may not be able to bear the costs of air bag production.

The decision noted that the low rate of use of active seat belt systems "negates much of their potential safety benefit", but said that the Department of Transportation continues to favour the use of all seat belts installed in all seating positions in a vehicle, regardless of whether it is also equipped with passive restraints. It acknowledged that the "use of any seat belt installed in accordance with the standard is necessary to enhance the safety of vehicle occupants".

Legislating Improvements In Automobiles

The major force in bringing design improvements into the automobile market, and for ensuring that their potential is realized, is the regulatory authority of government. In Canada, the federal government has responsibility for issuing domestic vehicle safety standards. The federal Motor Vehicle Safety Act, passed in 1969 with the approval of the provincial governments, empowered the Governor in Council to set out these standards. The administration of the Act was assigned to the newly created Road Safety Branch of the Ministry of Transport. The Branch's activities include: inspection of plants providing vehicles and components; purchase on the market and testing of vehicles and components; accident investigation; drafting and safety standard specifications.

There are, of course, difficulties in regulation that constrain government in this area. To set a standard, regulatory authorities must be certain that the technology exists to meet the standard, that there is a fair way of testing compliance and that the benefits are commensurate with the costs. For example, many experts believe that a major step in improving the safety of vehicles is to improve their handling characteristics, especially in emergency situations. However, it is unclear exactly what technological changes can be made, there is no satisfactory way to measure compliance with such a standard, and measuring the benefits would be very difficult.

Regulatory authorities in Canada face additional constraints because of the size of the automotive market. Canada is a small part of the total market of North American, European and Japanese automobile manufacturers. With few exceptions, standards for Canadian vehicles must be compatible with, though not always identical to, those of related jurisdictions. In addition, as a signatory to the Canada-U.S. Agreement on Automotive Products, Canada cannot set standards that create "unreasonable" barriers to the free flow of vehicles and parts across the border.

In practice, Canada gains more than it loses as a result of these constraints. All nations with significant automobile manufacturing facilities are working towards increasing safety standards. All meet regularly to ensure a reasonable degree of compatibility in approach. Canada benefits from the extensive work that is done in other jurisdictions.

Canada has opportunities as well to take its own initiatives and to have an impact on standards in other jurisdictions. For example, Canada allows rear-turn signal lights to be amber with stop and warning red as is the norm in Europe. The United States has resisted this lighting pattern, preferring the simplicity of all-red rear lighting. Canada is pressing Washington and the North American auto manufacturers to recognize the safety value of separate rear lighting, and to implement it as a universal North American standard.

Defining A Role For Ontario

Ontario also has a limited but significant role in the debates over North American standards. As a member of the Canadian Conference of Motor Transportation Administrators, Ontario

participates in a standing committee on motor vehicle safety standards, and like the other provinces, it is consulted for its views when the Road Safety Branch proposes an amendment to The Motor Vehicle Safety Act. Thus the Province has the opportunity to make an input in order to support a federal initiative, to attempt to redirect it, or to press the federal government to take a new initiative.

Since Ontario is the province with the largest stake - as manufacturer and consumer - in the Canadian automobile market, the Province has a particular responsibility to press for and support vehicle safety initiatives. For example:

§ Ontario should support the federal initiative for two-color rear lights. The Ontario public specifically recommended this change to the Committee, and research in the jurisdictions visited in Europe supports the recommendation

§ Ontario should press Ottawa for the introduction of more failure indicators, such as a light that indicates dangerous depletion of hydraulic brake fluid, and for the early introduction of wide, smooth, rubber-coated safety bumpers.

It is not necessary for Ontario to duplicate the federal testing and regulatory administration in order to play its part in improving the safety of vehicles on the road.

Accordingly, the Committee recommends that:

RECOMMENDATION VI-2: THE GOVERNMENT OF ONTARIO SHOULD TAKE AN ACTIVE PART IN SUPPORTING AND DIRECTING THE FEDERAL GOVERNMENT IN THE DEVELOPMENT OF STANDARDS FOR IMPROVING THE SAFETY OF AUTOMOBILES, AND IN PARTICULAR, SHOULD SUPPORT THE INTRODUCTION OF AMBER TURN SIGNALS ON ALL CARS SOLD IN CANADA AND THE EARLY INTRODUCTION OF WIDE, SMOOTH, RUBBER-COATED SAFETY BUMPERS ON ALL CARS SOLD IN NORTH AMERICA.

The U.S. decision on the air bag is important for both Canada and Ontario. If passive restraints become mandatory in the United States, all North American car buyers bear some part of the cost of their installation. The result could be pressure on the Province to repeal its seat-belt law and go solely with the passive American approach.

The Committee devoted a good deal of its time and attention to the consideration of the proper way for Ontario to deal with the air bag. The Committee visited Washington to hear from the major advocates of the air bag system and Detroit to hear the active opposition of the car manufacturers. The Committee heard first-hand the main points of the debate set out on page VI-7, and reviewed the large amount of supporting documentation prepared by the various active parties.

The Committee became thoroughly familiar with the way the air bag system works. It saw the various components of the system demonstrated by competent automotive engineers. It viewed films that showed in slow motion the deployment and action of air bags in test crashes with mannequins and the minimal effect of an accidental deployment in an actual test driving situation. Finally, members of the Committee sat in a car and actually experienced the deployment of air bags.

As a result of all the evidence it has seen and heard, the Committee believes that the air bag is a worthwhile step forward in automobile safety. The noise of the air bag inflating is loud, but not damagingly so; the speed with which the system is deployed is remarkable. The Committee believes, however, that the air bag system should be used in conjunction with, not in place of, the current lap and shoulder seat belt systems, for two reasons:

§ It is acknowledged that for secondary collisions, side-impacts or roll-overs, the air bag is not as effective as a lap belt

§ It is virtually impossible to enforce the wearing of lap belts only because the police cannot see from outside the car whether the seat belt is fastened.

The Committee believes that this approach offers safety advantages for everyone. Those who refuse to wear their seat belts (nearly half of Ontarians and 80% of Americans) will be given a significant degree of protection. Those who wear seat belts will be given an additional margin of protection. Finally, those who do not trust the air bag technology will continue to have the opportunity to secure themselves with a lap and shoulder seat belt.

Accordingly, the Committee recommends that:

RECOMMENDATION VI-3: THE GOVERNMENT OF ONTARIO SHOULD URGE THE FEDERAL GOVERNMENT TO MAKE PASSIVE RESTRAINT SYSTEMS MANDATORY IN ALL NEW CARS SOLD IN CANADA, BUT IT SHOULD CONTINUE TO REQUIRE USAGE OF THE FULL THREE-POINT SEAT BELT IN ONTARIO TO MAXIMIZE THE EFFECTIVENESS OF AIR BAG SYSTEMS.

As well as playing a role in the North American system for improving the overall safety of automobiles, Ontario can have its own role in very particular areas. If certain safety equipment is offered as an option on virtually all cars sold in the Province, then it is possible for the Province to make that equipment mandatory. The rear-window defroster is a perfect example of the type of equipment that offers the opportunity to take this approach. It will never be a North America-wide requirement because it is unnecessary in the southern United States. Nor is it likely to be a Canadian standard. It is only marginally useful in the heavily populated lower mainland of British Columbia, and some critics claim that it is ineffective in the extreme cold of the Prairie provinces or the far North. In Southern Ontario, where the bulk of the Province's car population is concentrated, it is a very useful safety feature.

Accordingly, the Committee recommends that:

RECOMMENDATION VI-4: THE GOVERNMENT OF ONTARIO SHOULD INVESTIGATE ALL WIDELY AVAILABLE OPTIONS THAT ADD SAFETY VALUE TO THE VEHICLE AND MAKE THOSE MANDATORY THAT ARE OF PARTICULAR VALUE TO THE PROVINCE, AND SPECIFICALLY, SHOULD REQUIRE ALL NEW VEHICLES SOLD IN THE PROVINCE TO BE EQUIPPED WITH REAR-WINDOW DEFROSTERS.

MAINTAINING VEHICLES IN A SAFE CONDITION

While federal governments and manufacturers make a sustained effort to get safe, low-polluting, energy-efficient new cars on the road, it is the responsibility of the owner and provincial and municipal governments to ensure that vehicles on the road are kept in safe condition.

There are two important ways of doing this: by ensuring proper vehicle maintenance and repair; and by preventing the addition of unsafe components to the vehicle.

Ensuring Proper Vehicle Maintenance

Many jurisdictions in North America and Europe have a system of mandatory periodic motor vehicle inspection (PMVI). The rationale of PMVI is simple. A vehicle in good working order with properly adjusted brakes and steering, adequate tread on its tires and operative lights and signals, for example, must be safer than other vehicles; a vehicle inspection system that can keep vehicles in this condition at an acceptable cost must be worthwhile. This part of the report focuses on PMVI, discussing the benefits it can offer, explaining why Ontario has a limited program now, and recommending a more extended system for the Province.

The major rationale of PMVI is safety. The Monroe County, Indiana, accident study conducted by NHTSA showing vehicle defects to be the definite cause of 6% of accidents and the probable cause of another 10% concluded that over 90% of the defects related to neglect or improper maintenance of the car. The predominant areas of neglect were brakes, tires and steering.

There are indications that vehicle conditions in Ontario are not significantly different. In evidence presented to the Committee, Imperial Oil Limited reported that of 500 cars inspected at its diagnostic clinics, 80% needed some attention, 60% required work on the suspension, and 40% on brakes. Since drivers who go through the diagnostic centres do so voluntarily, and therefore are more conscious of the condition of their cars than the general population, it is likely that the proportion of defects in safety-related components in the total car population in Ontario is actually higher. The potential benefits from PMVI in terms of vehicle safety for Ontario are obvious.

A second benefit of PMVI is that it helps vehicle owners by extending the life of the car. In Sweden, it was found that the life expectancy of cars increased from 10.4 to 14.2 years following the introduction of compulsory inspection. Meanwhile, the life expectancy

of North American cars stayed at about 7 to 10 years. Some states are thinking of extending the consumer benefit of PMVI by defining it as a diagnostic check and requiring that an estimate of repair cost be provided. This would ensure that motorists do not pay for unnecessary repairs or accept excessive bills.

A third benefit is that PMVI provides a regular system for ensuring that other standards are maintained. For example, anti-pollution equipment would have to be operative, seat-belt warning lights and buzzers would have to be connected, and fuel-saving equipment could be checked. The Ministry of the Environment in Ontario would welcome a PMVI system that gave it an opportunity to check out anti-pollution equipment.

Ontario has a PMVI program for automobiles, but on a selective basis. Rather than requiring that all vehicles be inspected at certain intervals, the Ontario program focusses on the vehicles that are considered likeliest to have defects - all used vehicles at the point of transfer of ownership and all used vehicles coming into Ontario from other jurisdictions.

These used vehicles must undergo a rigorous inspection to obtain the Ministry of Transportation and Communications' Safety Standard Certificate. The inspection was revised in 1974 to include a more extensive safety-standard examination. It specifies a penetration of the system, and the removal of all four wheels. Since brake and steering defects cause most vehicle-fault accidents, and wear of braking and steering systems is of particular concern with older, used vehicles, there is ample justification for removing all wheels to detect worn brake linings and pads, leaking cylinders, corroded pipes and components, etc. In addition, the vehicle is lifted and a complete check is made of the condition of the steering and suspension systems.

Safety Standard Certificates are issued by privately owned service stations that have been licensed by the Ministry of Transportation and Communications to perform the inspection. To receive a licence, a station must have both satisfactory premises and tools to carry out the inspection, and employ certified motor vehicle mechanics. No restrictions are placed on the number of licensed stations. At present, there are more than 8,600 such stations, staffed by approximately 41,000 licensed mechanics.

The Ministry inspects the premises of all stations applying for inspection licences. It also investigates all complaints about stations that have already been licensed, and will lay charges if a false statement appears on the certificate, or an evaluation was incomplete. While some trafficking in certificates has occurred, and this is a public concern, both the Ministry and the Committee considered that such problems were isolated. Since 1974, nine stations have had their licences revoked, 74 have given up their licences rather than be examined, and several have received temporary suspensions.

This compulsory inspection program is supported by a random, spot-check system operated by the Ministry. Ontario police are empowered to require any vehicle to undergo a "spot" inspection, which may be conducted either at the Ministry's permanent inspection station in Downsview or by one of its touring inspection "lanes". The Ministry has 13 such lanes that operate only during the summer. In the summer of 1976 ten such lanes were in operation at a cost of \$1,200 per week. Many police forces make a concerted effort to identify vehicles that show evidence of disrepair or poor maintenance when the lanes are touring in their area. While motorists are free to request an inspection, 82.5% of the vehicles going through the lanes do so as a result of police insistence. These safety checks do not penetrate the vehicle system. Largely due to time and financial restrictions, no wheels are removed. In addition, only the front end is lifted for a check under the vehicle.

Several interrelated reasons are cited for not having a complete PMVI system. First, it is a major financial undertaking to develop and operate a comprehensive system. Ontario's system tries to target at the areas of greatest payoff. Second, unless the inspection is thorough, the critical components of the vehicle are often ignored. Critics of inspection contend that all too often extensive resources are expended on identifying minor defects, such as poorly adjusted headlights or defective windshield wipers. They suggest that using cost-benefit criteria, a periodic motor vehicle inspection system cannot be justified. Third, an inspection only catches the vehicle at one point in time; a defect can easily occur between inspections. In every inspection, for example, all the lights are checked. In fact, a light bulb can burn out the moment the vehicle pulls away from the inspection station.

The Committee believes that Ontario should extend its PMVI system. It is very aware, however, that the kind of inspection system used is critical. A 1971 study done for the U.S. Department of Transportation that compared 1,000 vehicles from each of three states - California, New Jersey and Pennsylvania - found a significant difference in the condition of vehicles in these states. In Pennsylvania, which specifies periodic motor vehicle inspection for all vehicles twice per year by privately operated stations, vehicles were in significantly better condition than in New Jersey, where there is an annual inspection by state-operated stations. Vehicles in both states were in better condition than those in California, where vehicles are inspected randomly.

A comprehensive state-operated system is expensive, however. In New Jersey, where vehicles are inspected in state-owned stations, the state spends 26% of its safety budget and 40% of its motor budget on vehicle inspection. Since there is a great demand for increased public spending in other areas, this massive expenditure may not be justified by the potential benefits to be gained.

Instead, the Committee is recommending an extensive inspection of older and seriously damaged vehicles. The longer a vehicle is on the road, the greater the chance of vehicular failure through wear. As a representative of the Ontario and Toronto Automobile Dealers Association suggested:

"Automobiles are perishable commodities, and . . . conventional running maintenance is mandatory for the vehicle to be operated in an efficient and safe manner. The closer an automobile approaches 100,000 or 150,000 miles, the more it is virtually used up".

As well, the Committee was concerned about the condition of vehicles that return to the road after being repaired for serious accident damage. MTC believes that many vehicles that have had extensive steering, braking or suspension damage may still show signs of this damage after being insufficiently serviced.

Extension of the rigorous inspection for the Safety Standard Certificate to older and seriously damaged vehicles is economically justifiable if the inspection is conducted at existing facilities and the service is made self-supporting. There are ample facilities around the Province to carry out the inspection and provide the needed easy accessibility for vehicle owners. Imperial Oil estimated that its service bays are running at a third of their capacity, and would have little difficulty in handling the extra load. Other oil companies have similar excess service capacity. The vehicle owner should not regard the added expense as an unfair burden, since the inspection will cost approximately as much as a tank and a half of gas, and will increase the safety of the vehicle.

Accordingly, the Committee recommends that:

RECOMMENDATION VI-5: THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD EXTEND ITS MOTOR VEHICLE INSPECTION SYSTEM THROUGH LICENSED STATIONS TO INCLUDE:

- ANNUAL INSPECTION OF CARS FIVE YEARS OLD OR OLDER
- INSPECTION OF EVERY CAR RECEIVING MORE THAN \$800 DAMAGE IN AN ACCIDENT.

MTC should evaluate the extended PMVI program very closely. It may be that the data will support the inspection of cars before they reach the fifth year. In any event, all motorists should be encouraged to keep their vehicles in good working order - whatever the age of their vehicles.

Accordingly, the Committee recommends that:

RECOMMENDATION VI-6: THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD ENCOURAGE MOTOR VEHICLE OWNERS TO SEEK ANNUAL INSPECTION OF THEIR VEHICLES ON A VOLUNTARY BASIS.

One very specific problem identified in the Safety Standard Certificate program is the shock absorber standard. The shock absorbers hold the wheels on the road over uneven surfaces, and are critical in the safe operation of the vehicle. The present standard specifies that shock absorbers need only be attached at the top and bottom, and appear to be unbent, in order to pass the safety test. In practice, they can be completely inoperative, yet pass.

Accordingly, the Committee recommends that:

RECOMMENDATION VI-7: THE GOVERNMENT OF
ONTARIO SHOULD CHANGE THE INSPECTION STANDARD
FOR SHOCK ABSORBERS TO SPECIFY "GOOD WORKING
ORDER".

Taking a New Approach To The After-Market

The automotive after-market refers to the very extensive buying and selling of parts and components for cars after they leave the manufacturer. A car that initially meets all the federal safety standards could be almost totally rebuilt from after-market parts, including hard (or soft) shock absorbers, extra-strong or yellow lights, or special windshield wipers. Control of the "after-market" is under the jurisdiction of the Province.

Ontario exercises its jurisdiction over the after-market primarily through its participation in the American Association of Motor Vehicle Administrators' equipment approval program. When a manufacturer wants to market a product for a car, the company applies to the Association attaching a copy of its test report showing that the device meets an accepted standard. The Association determines whether the component meets the standard. If the manufacturer then wishes to sell this product in Ontario, the company forwards a copy of the application and the approval certificate to the Ministry of Transportation and Communications. MTC then decides whether the component is acceptable by provincial standards. Usually, MTC endorses the Association's certificate.

One of the anomalies of the Ontario system is that it controls only the use of products - not their sale or installation. Vendors are free to sell, and individuals to buy, components that MTC has prohibited or not yet assessed. Theoretically, the individual is also free to install such components - but not to use them. For example, a driver could buy extra-powerful headlights and install them on his vehicle. The police have authority to lay a charge only if they are able to identify the components, when in use, as illegal items.

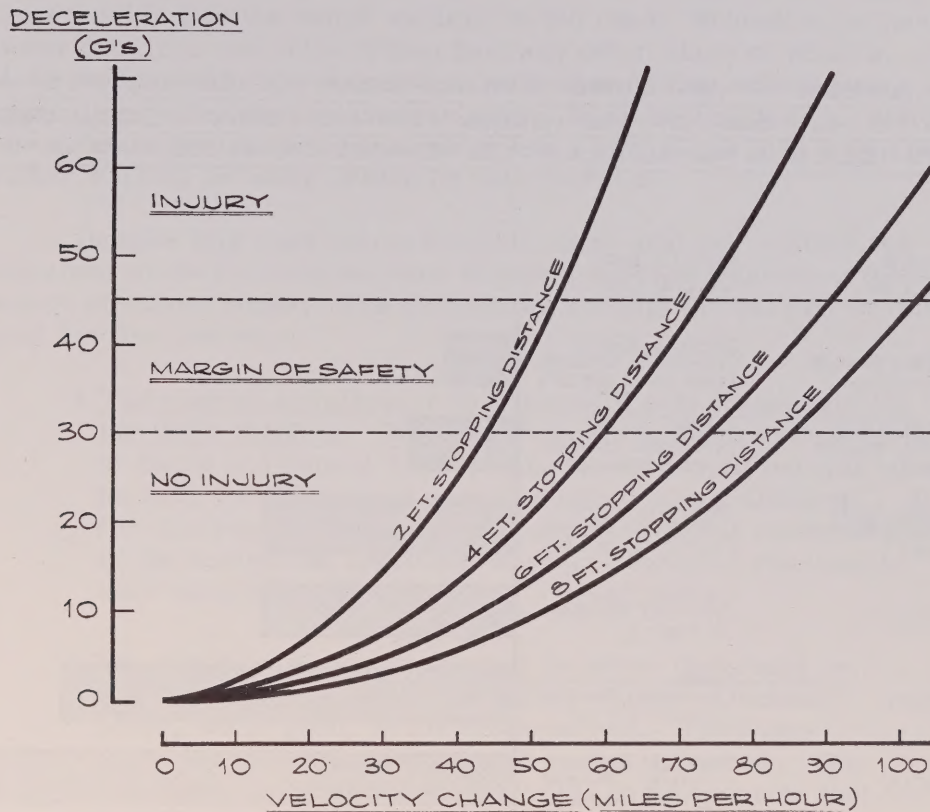
The Committee is aware that the current system works reasonably well for most products. Nevertheless it believes that a comprehensive system will be far more effective in discouraging the marketing of unsafe components. The anomaly whereby prohibited products may be sold should be corrected. To prevent the purchase of these devices in other jurisdictions outside of Ontario, their installation should also be prohibited.

Accordingly, the Committee recommends that:

RECOMMENDATION VI-8: THE GOVERNMENT OF
ONTARIO SHOULD BAN THE SALE AND THE INSTAL-
LATION AS WELL AS THE USE OF UNAPPROVED AFTER-
MARKET COMPONENTS.

IT IS QUITE POSSIBLE FOR A PROPERLY SEAT-BELTED
OCCUPANT OF A GOOD-SIZED VEHICLE WITH AMPLE
"CRUSH SPACE" TO SURVIVE A 70-MPH CRASH

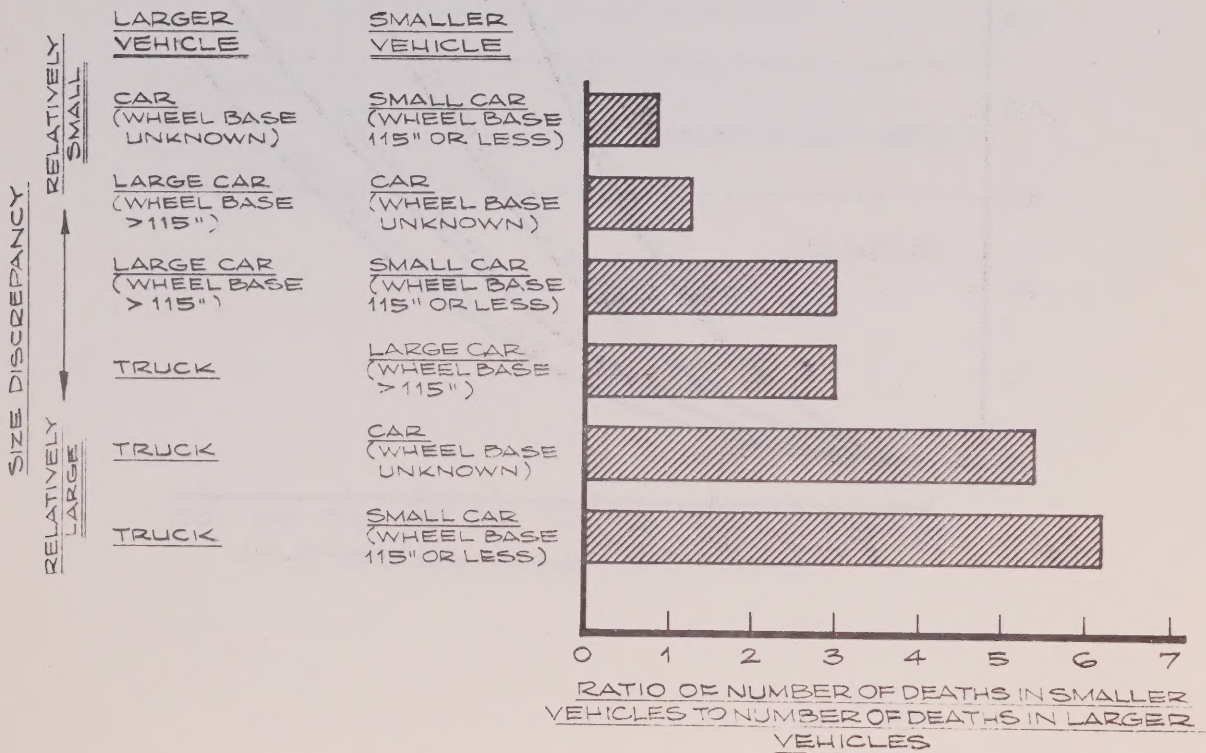
BASED ON PROPERLY SEATED ADULT MALE WEARING 3-POINT
SAFETY BELT IN A FRONTAL COLLISION



SOURCE - WILLIAM HADDON JR.
PRESIDENT, INSURANCE INSTITUTE FOR HIGHWAY SAFETY
REDUCING THE DAMAGE OF MOTOR-VEHICLE USE

IN A FATAL ACCIDENT, IT IS THE OCCUPANT OF THE SMALLER VEHICLE WHO IS LIKELIER TO BE KILLED

RATIO OF NUMBER OF VEHICLES IN WHICH DEATH OCCURRED, IN SMALLER VEHICLES TO NUMBER OF VEHICLES IN WHICH DEATH OCCURRED IN LARGER VEHICLES IN FATAL MULTIPLE VEHICLE CRASHES, MARYLAND 1970-71



SOURCE - MOTOR VEHICLE SIZES IN 1,440 FATAL CRASHES
LEON S. ROBERTSON & SUSAN P. BAKER

SECTION VII

THE SCHOOL BUS

In Ontario, as throughout North America, the familiar yellow school bus has an excellent safety record. On a statistical basis, the school bus is the safest vehicle on the road. School buses have fewer fatalities per mile driven than any other class of vehicle. A U.S. study of injuries per vehicle mile showed that school buses are eight times safer than passenger cars. In statistical terms, children are safer being transported to school in a school bus than they are either walking or being driven by their parents.

Despite this impressive record, many oral and written submissions to the Committee were directed towards improving the safety of school buses. The Committee accepts the validity of this goal for four reasons:

§ The special significance to parents of safe transportation for their children. Mr. J. Bates of the Ontario Federation of Home and School Associations spoke for all parents when he said that "our most precious cargo is our children". If for this reason alone, any improvements that can be made in the design and operation of school buses at reasonable cost must be made

§ The fact that accidents can and do occur that could be avoided or minimized. The safety record of school buses, while good, is far from perfect. The Committee believes that the record can be improved. The Committee was informed of several improvements that could be made to school buses that would reduce the frequency and severity of injuries, as well as the probability of a fatality

§ The increasing exposure of school-age children to school busing. The Committee noted that the possibility of an accident occurring is increasing yearly as the number of school children travelling by bus increases. In the 1975-76 school year, about 600,000 pupils were transported to and from school every day, nearly a 50% increase over 1966-67 (Exhibit VII-1). The reasons for the increase include the consolidation of smaller school boards, the increase in specialized programs and the growing number of specialized schools. It should be noted also that even children who are not bused to school frequently travel in school buses on field trips and excursions. As the shrinking school-age population causes more schools to close, school busing could continue to grow

§ The increasing chance of a major catastrophe. The consequences of a serious school bus accident are increasing as school buses, for economic reasons, become larger. Today, the "little yellow school bus" can hold as many as 72 children, whereas the largest school bus carried only 54 children a few years ago. With more children together in a single bus, the scale of prospective tragedy has increased - much as the advent of the jumbo jet increased the potential consequences of an air accident.

This section of the report sets out the kinds of improvements that could be made in school buses, outlines the problems in getting them introduced, and recommends a more active role for the Province in school bus safety.

IMPROVING SCHOOL BUS SAFETY

The Ministry of Transportation and Communications and the Ministry of Education, often working through school boards, have already recognized the special status of the school bus.

§ All school buses procured by school boards for operation in the Province of Ontario must conform to specification D250.1-1975 of the Canadian Standards Association (CSA). This specification covers both the construction of and the components and equipment on the school bus

§ The vehicles are inspected every six months by licensed mechanics, and MTC sends out its own personnel to verify the thoroughness of the inspection

§ Drivers are subject to the tightest set of conditions for securing and retaining their licences.

Nevertheless, there are several areas where improvements could be made in school bus safety.

Some concerned organizations and school boards suggested that strengthening the CSA standard would help to reduce the incidence of accidents and to maintain the integrity of the vehicle structure when an accident occurs.

§ The Ontario Federation of Home and School Associations has passed a resolution calling for the use of radial tires for improved traction and one-piece, full-length, side and roof panels to increase the strength of the bus frame

§ In its new-bus procurement, the North York Board of Education specifies many safety features not required by the CSA standard, including tinted safety glass, defroster fans, heavy-duty wipers and an under-floor luggage compartment.

Two approaches have been suggested to reduce fatalities and injuries from the "second collision" of the school children with the inside of the bus: seat belts and safety seats. The latter appear to offer greater promise.

§ Many people urged the Committee to recommend installation of seat belts in school buses. However, the Committee found several practical problems with this well-intentioned suggestion:

- Only lap belts could be installed, and rows of seats in school buses are so close together that in an accident, belted students may strike their heads on the seats in front of them
- In test installations, obtaining a high rate of use proved difficult, and children playing with belt buckles injured each other

- School bus floors constructed to the present standard are not strong enough to provide firm anchor. If their strength were increased, the added weight would make existing engine, transmission and brake systems inadequate, and increase fuel consumption

§ A padded safety seat appears to be a more productive approach:

- The University of California at Los Angeles (UCLA) has developed a well-designed safety seat that "pockets" the individual child. The high-backed seat is padded, as are the arm rests. In an accident, the child would be thrown forward against a seat back made of slow-recovery foam on a yielding metal panel
- The UCLA researchers concluded from their studies that a safety seat similar to that described will prevent all but minor injuries in moderately severe collisions.

Many people also urged the Committee to recommend universal regulations for the operation of school buses. Suggested regulations would, for example, prohibit standees and three-to-a-seat sitting, and require a monitor on each bus to ensure that all children remain seated. It is clear that these measures would make school busing safer. Bus riders are safest when they are seated in seats designed to accommodate them. Standees, or riders sitting partially in the aisle, are more likely to be injured or killed in a serious accident.

INTRODUCING SCHOOL BUS SAFETY FEATURES

To date, the Province has limited its role in school bus safety to working with the Canadian Standards Association on the overall standard for school buses. Responsibility for making improvements over the base level set by the CSA and the Province lies with the individual school board.

§ Some school boards own and operate their own buses and can set their own purchase specifications

§ Other school boards contract for busing services from large fleet operators, but can make certain specifications in the contract.

School boards have two main difficulties in implementing improvements in school bus safety: uncertainty about the effectiveness of safety measures and lack of funds.

§ Decisions on equipping school buses about the CSA standard tend to turn on the question of cost-effectiveness. As with highway safety generally, there is a great deal of debate about what measures are effective. And, additional equipment for school buses must compete with prospective purchases for teaching equipment or school building improvements. Since the safety record of school buses is so good, and since there is no "proof" that the additional equipment will prevent an accident, most school boards merely accept the CSA standard

§ Elimination of standees or crowded seats, however, is essentially an economic problem - lack of funds for enough buses and drivers. All school boards contacted by the Committee reported that they try to avoid standees wherever possible, and some school boards have a strict rule against standees at any time.

The Committee agrees with the present division of responsibility for school bus safety. Locally elected school boards should be responsible for the safety of the children being bused in their area. Local school boards should decide how their money will be spent.

The Committee is deeply concerned, however, that the school boards are making critical safety decisions on the basis of very limited and incomplete information. Even school boards that specify additional safety features on new bus purchases, such as North York, admit that their technical capability for assessing new features is limited. Smaller boards especially have scant means of evaluating manufacturers' claims that one kind of equipment or another provides an additional element of safety that is commensurate with the cost. Further, there is no mechanism for disseminating the knowledge gained by a board that tries a new safety feature. The Committee believes that the provincial Government could very usefully fill this gap.

The Government of Ontario through MTC could evaluate available safety equipment options and make its assessments available to school boards across the Province. It could gather data from school boards on their experience with new equipment and make that information available to all school boards. It could provide a base of objective information on school bus safety that would assist local school boards in carrying out their responsibilities as well as identifying areas for change in the minimum CSA standard.

Accordingly, the Committee recommends that:

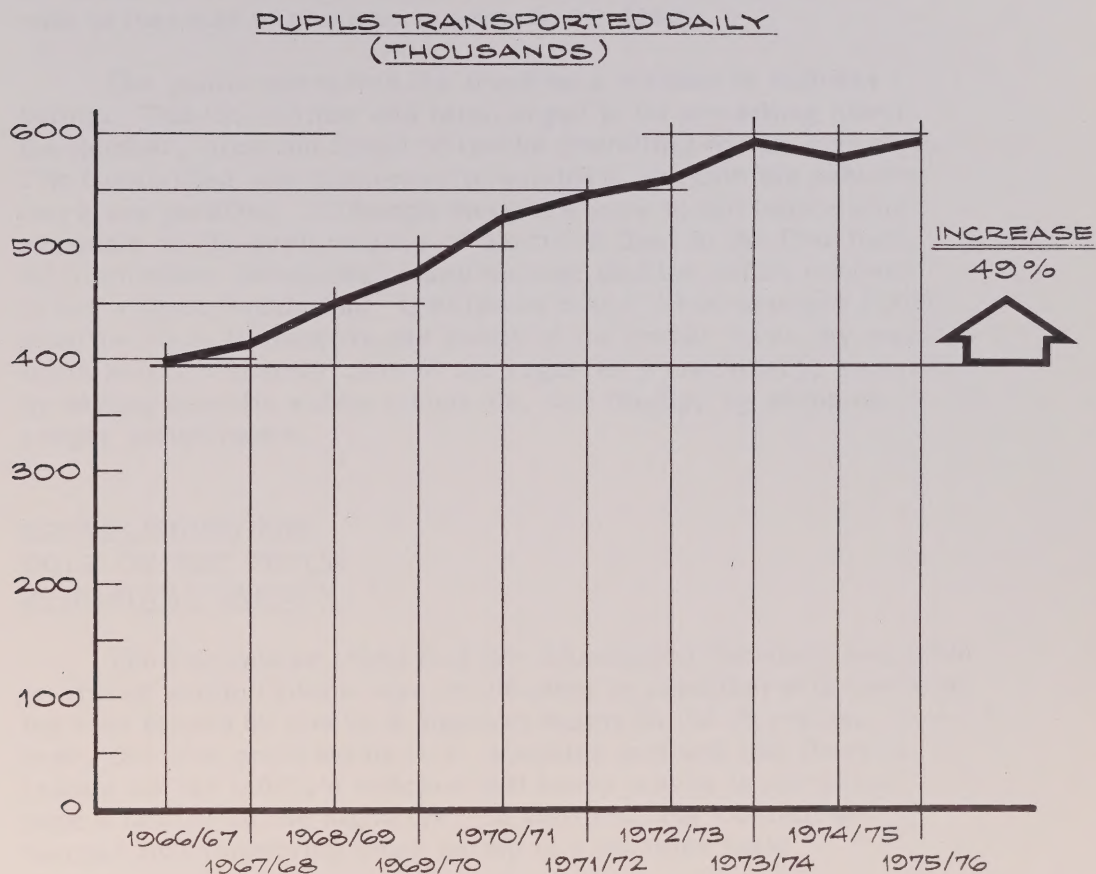
RECOMMENDATION VII-1: THE GOVERNMENT OF ONTARIO SHOULD ACCEPT RESPONSIBILITY FOR GATHERING, EVALUATING, AND DISSEMINATING INFORMATION ON EQUIPMENT, SAFETY FEATURES AND OPERATION OF SCHOOL BUSES.

The Committee is also concerned by a practice recently adopted by some school boards of contracting for private vehicles to carry small numbers of children to and from school or on school-sponsored trips. Vehicles used for this taxiing are not classified as school buses, and thus none of the specific regulations and standards for school bus safety apply to them. MTC and the Ministry of Education should investigate this new development to ascertain whether new standards are required to ensure the safe transport of school children. At a minimum, the vehicles involved should be thoroughly and regularly inspected.

Accordingly, the Committee recommends that:

RECOMMENDATION VII-2: THE GOVERNMENT OF ONTARIO SHOULD REQUIRE THAT ALL VEHICLES UNDER CONTRACT TO A SCHOOL BOARD AND USED FOR THE TRANSPORTATION OF SCHOOL CHILDREN BE GIVEN A SAFETY INSPECTION BY A LICENSED MECHANIC EVERY SIX MONTHS.

IN TEN YEARS, THE NUMBER OF PUPILS TRANSPORTED DAILY
HAS GROWN BY NEARLY 50%



SOURCE - MOTOR VEHICLE ACCIDENT FACTS, 1976

SECTION VIII

THE TRUCK

The truck is a major component of traffic in Ontario. The 534,855 trucks registered in the Province in 1974 constituted over 14% of vehicles on the road. Our society has come to depend on the truck as the primary carrier of goods to market, and this role is forecast to continue to grow in the 1980s.

The public perceives the truck as a menace to highway safety. The Committee was often urged to do something about the number, size and speed of trucks travelling on our highways. The Committee was concerned to establish whether the public's fears are justified. Although there are gaps in the information available on the performance of the truck fleet in the Province, the Committee concludes in this section that the public concern is not without foundation. It believes that a three-pronged effort must be made to improve the safety of the truck: first, by making truck safety a specific part of the regulatory machinery, secondly, by setting specific safety standards, and finally, by ensuring proper maintenance.

ESTABLISHING THE ROLE OF THE TRUCK IN HIGHWAY SAFETY

The Committee found that the information currently available on trucks within Ontario was insufficient to establish with certainty the role played by trucks in highway safety in the Province. However, the data provided by U.S. agencies indicate that there is reason for the public's concern that heavy trucks in particular pose a hazard on the highways. In addition, the Committee learned that improving truck safety is a complex task.

Assessing The Truck's Safety Record

The difficulty of establishing with precision the safety record of trucks in Ontario arises from the lack of specific data on trucks by type and size:

§ The Ministry of Transportation and Communications defines the truck simply as a commercial vehicle. The category embraces small pick-ups as well as huge tractor-trailer combinations

§ The Ministry does not record the number of trucks by weight category in its overall statistics on trucks or its accident data.

The Ministry did a survey to categorize the commercial vehicle population in 1971, which it still uses as a general indicator. Of the approximately 372,000 vehicles surveyed, 272,892 or 73.4% were under 10,000 pounds; 77,007 or 20.7% were between 10,000 and 49,500 pounds; and 21,764 or 5.9% were 50,000 pounds or over. The Ministry believes that the percentages have remained much the same over the last six years.

U.S. statistics suggest, however, that it is possible that these percentages have not remained constant. The U.S. data show a dramatic increase in heavy motor vehicle carriers from 1970 to 1975. And a U.S. inter-agency study of post-1980 goals for commercial vehicles projected an increase in the total national movement of freight from 590 billion ton miles in 1975 to just under one trillion ton miles in 1990, requiring a major increase in the number of heavy trucks on the road.

Available Ontario statistics do not indicate a disproportionate involvement of trucks in accidents in the Province. In 1974, the generic category of "trucks" was involved in 12% of all collisions, 17.5% of all fatalities and 11% of all personal injury accidents. Since trucks accounted for 14.3% of all motor vehicle registrations, these figures do not suggest any major overrepresentation in the accident picture. But the lack of data by weight category makes it impossible to determine whether heavy trucks account for more than their share of accidents in Ontario.

U.S. figures, however, tend to suggest that the accident record of heavy trucks is cause for concern. Dr. Stephen Sacks of the Office of Crash Avoidance, Handling and Stability Division of the NHTSA suggested to the Committee that heavy trucks of over 20,000 pounds in particular are overrepresented in accidents when the proportion of vehicles registered is compared with their fatality rate. Although trucks of this size account for only .8% of all vehicles registered in the U.S., they are involved in 4.8% of all fatalities.

In assessing the role of the truck in accidents, it is important to take into account the annual mileage travelled. The Ontario Trucking Association estimated that the annual mileage of its members' tractor-trailers may be as high as 100,000 miles per unit. This is ten times the average yearly mileage of the passenger car.

A cause for concern is the hazard the large truck represents to other vehicles. If a car collides with a tractor-trailer, the occupants of the car are much more likely to be killed than those of the truck. In fatal truck-car collisions in the U.S., 80% of the deaths occurred among occupants of the cars, only 20% among occupants of the trucks.

Given the expected increase in the number of trucks on the road, the need to improve their safety record is all the more pressing.

Improving Truck Safety

Minimizing the hazard of the truck on the road is a complex task. The factors that affect the stability and manoeuvrability of the truck and therefore its safe operation include configuration, loading, stiffness of tires and suspension, strength and flexibility of articulation points, and braking capacity.

§ The many different kinds of configuration of the truck include a single unit, a tractor and trailer, a tractor with semi-trailer and pup trailer, or a "double", and a tractor with semi-trailer and two pup trailers, or a "triple" (Exhibit VIII-1). Each configuration has different handling and loading characteristics, and therefore presents different safety problems

- § The load must be balanced and firmly secured. If the centre of gravity is placed too far forward, too far back, or at either side, the resulting imbalance make the truck unstable. A load that is not firmly secured will move within the vehicle, causing drastic changes in handling and possibly loss of steering control
- § Both tires and suspension should be stiff to counteract the tendency to roll caused by irregularities in the road surface
- § Articulation points, the structures that connect one section of a truck to another, should be taut. Slackness allows a "wagging" of the trailers that the driver often fails to sense. This creates the possibility of jack-knifing - that is, the back end swings out from its in-line position - or roll-over
- § Too often, hard braking of a large truck with brakes built to the U.S. pre-1975 standards results in locking of the wheels. If this occurs, lateral traction all but disappears. The driver has difficulty in sensing the locking of the wheels, and may react too late to rectify the situation. The outcome may be skidding, spinning out or jack-knifing.

The Highway Traffic Act contains numerous regulations for the commercial vehicle. Parts VI and VII, sub-sections 64 to 81, attempt to regulate the stability of the truck, with specifications relating to the gross weight of the vehicle, height and length, width, number of tires, and loading, as well as restrictions on the kinds of equipment on the vehicle. Although the current regulations may be justified, they leave too much unregulated in terms of safety.

- § The major concern of regulations for the truck has often been wear on the roads, rather than safety. For example, the extensive restrictions in the Act on axle weight and spacing are primarily aimed at preventing damage to roads and bridges. The different restrictions for trucks using Class B and Class A highways are dictated by the wear each can withstand. Because of the roadway's

particular vulnerability during spring thaw, specific limitations are placed on weight in March and April. The Act states that the "owner, driver, operator or mover" is responsible for any damage done to the highway by an overweight vehicle

§ Economic considerations are often traded off against the demands of safety. For example, the Committee was advised that larger units provide for more economic transportation of goods and savings on fuel. The tendency, therefore, has been to maximize load-carrying capabilities within the Act's length restriction of 65 feet, even though this may create an unstable and sometimes dangerous configuration. The Act does not forbid joining a short-wheel-base tractor to a comparatively long trailer by a very short draw bar. This configuration is unsafe, because the mismatch between tractor and trailer creates an unsafe vehicle that could oscillate and jack-knife.

In recent years, the Ministry of Transportation and Communications has attempted to deal with certain oversights in the regulations. In 1973, legislation was passed that provided for regulation of the loading for specific types of cargoes. For example, special loading restrictions were placed on steel posts and logs. Despite this recent legislation, the regulations still do not address some of the major truck safety issues.

In addition, there are difficulties in enforcing the regulations that do exist. In theory, all commercial carriers on the Province's highways are checked for gross and axle weights at truck inspection stations. There are 48 such stations on major highways, and by law, a commercial vehicle must pull into all lighted inspection stations it passes. A limited number of portable weigh scales are also used by inspectors on a spot-check basis. The problem is in the application of the axle-loading formula. Inspectors find the formula difficult and cumbersome to apply, and thus tend not to. Gross weight requirements are simple to enforce, and in most cases, if these have been satisfied, the carrier is allowed to continue. The result is that regulations that bear directly on vehicle stability are not being utilized effectively.

One simple regulation that would have a safety impact and is easily enforceable is to require reflectorized material on the back of all vehicles. Since a new reflectorized licence plate is being introduced, additional reflectorization is required only on the larger vehicles, specifically those vehicles over 18,000 pounds that relate to Classes A, B, C and D of the classified driver licensing system.

Accordingly, the Committee recommends that:

RECOMMENDATION VIII-1: THE GOVERNMENT OF ONTARIO SHOULD REQUIRE A WIDE BAND OF REFLECTORIZED MATERIAL ON THE REAR OF ALL VEHICLES OVER 18,000 POUNDS, OR THOSE THAT CORRESPOND TO CLASSES A, B, C AND D OF THE CLASSIFIED DRIVER LICENSING SYSTEM.

MAKING SAFETY A MORE EXPLICIT PART OF THE REGULATORY MACHINERY

Over the last decade, extensive research has been conducted to determine the measures that should be taken to create a safer truck. The Committee sought a cross-section of opinion from the people involved in this research. Among the recognized leaders in truck research who appeared before the Committee were: Dr. John Ellis, head of the Department of Automobile Engineering at the Cranfield Institute of Technology, in Bedford, England; Dr. Sacks of the NHTSA; and Dr. Edwin Mikulcik, Associate Professor of Mechanical Engineering at the University of Calgary.

These experts and others readily admitted that there are large "grey areas" where too little is known with any certainty about truck safety. They maintained, however, that much is now certain. The experts agreed that far more specific regulations could be introduced relating to such issues as configuration, loading and articulation points. The existing regulations in Ontario do not reflect what the experts believe to be the present state of knowledge.

The Committee has concluded that the Province should make safety a more explicit part of the regulatory machinery, by drawing on the best trucking industry practice and focussing on the special problem posed by the "double".

Meeting The Best Industry Standards

Expert witnesses who appeared before the Committee were unanimous in their praise of the heavy trucking industry for putting into practice most of what is known about commercial vehicle safety. They suggested that the voluntary self-regulation adopted by big fleet operators could serve as an example for all vehicle carriers.

The Committee found that there are several explanations why the heavy trucking industry developed its own series of regulations, through a process of trial and error, to supplement those contained in The Highway Traffic Act.

§ In part, self-regulation by large fleet operators is motivated by concern for their public image, on which their livelihood often depends. It is not in their interest to be viewed as irresponsible. Involvement in major accidents or roadside breakdowns would increase public resentment of large trucks on the highways

§ The industry also fears further government regulation resulting either from public pressure or a poor safety record. It prefers self-regulation to the introduction by government of restrictions that it might find unacceptable

§ Large-fleet owners have found that accidents and breakdowns are costly, and have adopted a preventive approach to avert the financial burden that might result from unsafe loading or poor servicing of a carrier.

While it is clear that self-regulation by the heavy trucking industry is primarily dictated by self-interest, it is equally clear that this practice benefits not only the industry but the public as well.

The Committee is concerned, however, that too little of the trucking industry is influenced by the large operators' example. The membership of the Ontario Trucking Association (OTA) has set relatively rigid safety standards and is the major proponent of self-regulation in the Province. This membership includes 80 private fleet operators running 62,654 commercial vehicles, but these account for only 10.8% of truck and tractor registrations in the Province. Many of the numerous operators of trucks registered as "private carriers" do not apply the OTA standards.

The operator of a private carrier, who may own both the truck and the goods being transported in them, does not have the same incentives to self-regulation as larger operators. The owner may fail to adopt higher standards because of ignorance of their existence. He may not have had the benefit of extensive experience of the hazards of moving cargo. He is often less concerned with his public image. Often, his overriding aim is to carry as much cargo as fast as possible. Responding to economic pressures, he may ignore the dictates of safety.

Ministry statistics do not in fact show whether the private carrier causes or is involved in more accidents than other trucks. Nor do they show whether the private operator is charged more often than the large fleet operator under The Highway Traffic Act, The Public Commercial Vehicle Act or The Motor Vehicle Transport Act. Yet the opinion of the trucking industry, the research experts and MTC personnel alike was that the private carrier does constitute a greater safety problem than the large fleet operator.

The Committee believes that all owners and operators of trucks should have the benefit of higher safety standards, and those who have chosen to flout safe practice should not be allowed to continue to do so. Industry practice and expert research efforts have created a level of consensus on the new standards that should be imposed on commercial vehicles. Until this consensus is codified and incorporated in the regulations of The Highway Traffic Act, it cannot be universally applied in Ontario.

Accordingly, the Committee recommends that:

RECOMMENDATION VIII-2: THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD WORK WITH THE TRUCKING INDUSTRY TO CODIFY A SET OF REGULATIONS FOR LOADING AND OPERATION OF ALL TRUCKS DRIVING IN ONTARIO THAT MEETS THE BEST INDUSTRY SAFETY STANDARDS.

Controlling The "Double"

When voicing objections to the "large" truck on the highways, the public usually referred specifically to the "double". Drivers expressed fears about the double bearing down upon the small passenger car, travelling at excessive speeds, and undertaking frequent lane-change manoeuvres. These fears are heightened by the increasing number of doubles on the highways.

The double has been a subject of controversy since its introduction in the mid-1950s. Since it is a relatively new addition to the roads, experts are still in the process of learning about its basic characteristics.

There are those who maintain that the double is an extremely "safe" vehicle. They hold that the double is the safest vehicle on the road, and say that the pup trailer, by providing weight at the back-end of the unit, discourages jack-knifing. They maintain the double has a better safety record than the semi or any other truck configuration. Others argue that too little is known about the behaviour of the double to label it either "safe" or "unsafe". They question its stability, and underline the hazard its complexity and size present to other vehicles on the road.

Those who question the double have found support in recent research studies emphasizing special problems. For example:

§ Pup trailers have been shown to have a natural tendency to oscillate, producing a tail-wagging motion in most high-speed operations (i.e., those over 45 mph). To compensate for this natural tendency, the driver must drive the double absolutely straight on the highway. If he varies at all from this pattern, the dangerous tail-wagging may be introduced, a motion that the driver often cannot sense, and that could lead to jack-knifing in extreme situations

- Despite contentions to the contrary by its defenders, there is no evidence that the pup trailer prevents jack-knifing. Research has shown that if the unit is heavily weighted at the rear, this encourages rather than discourages jack-knifing. It is far safer to have a heavy trailer in front of a light one, moving the centre of gravity forward, increasing the stability of the vehicle, and allowing for greater control
- Although extensive research has been done, no proven anti-jack-knife devices have been introduced. These devices would be attached to the "fifth wheel", or tow bar joining semi and pup through

a pintle hook, with the object of preventing slack, forcing the rear units to maintain their in-line position. No device developed to date has been able to do this with great efficiency. At best, devices now in use may slow the jack-knifing motion sufficiently to enable the driver to steer out of it. They rely on the driver's ability to sense the jack-knifing motion early enough to avoid it.

§ Other problems with the double combination involve manoeuvrability. For example, the tractor is usually a short wheel-based, very heavily tired vehicle that can turn easily, whereas the two trailers are long wheel-based vehicles that take longer to turn. In a cornering situation, the mismatch in turning times for the tractor, semi-trailer and pup trailer may cause the trailer units to roll over, or swing out into oncoming traffic. In urban traffic, where manoeuvre space is limited, this creates a hazardous situation for other vehicles, whose space is often encroached on by the double, even when it corners safely.

These problems are ample justification for giving special attention to the double configuration. The Ministry of Transportation and Communications is undertaking a major research project on the double that reflects its concern in this area. The project is studying the effects of changing the fifth wheel and axle locations, introducing different tow bar lengths, and running the vehicle with different loads.

Large fleet operators have already acted on their concern for the double combination. They have extensive internal regulations on loading, fifth wheel location, length of tow bars, etc. Their common practice is to place heavy trailers ahead of lighter ones, in order to increase directional stability.

The Committee believes that the Ministry should openly recognize the special problems presented by the double. The use of this vehicle should be carefully supervised to make it as safe as present knowledge allows.

Accordingly, the Committee recommends that:

RECOMMENDATION VIII-3: THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD ISSUE A SPECIAL LICENCE TO ALL OWNERS OF "DOUBLES", AND WORK WITH THE LICENSED OPERATORS TO ESTABLISH SUITABLE STANDARDS FOR THEIR MAINTENANCE, DRIVER CONTROL AND TRUCK LOADING PROCEDURES. IT SHOULD REVOKE THE LICENCE IF THESE STANDARDS ARE NOT MET.

SETTING SPECIFIC NEW TRUCK SAFETY STANDARDS

The foregoing recommendations deal with the problem of improving truck operation in the Province on a general level. There are specific areas of concern that were consistently raised in the Committee's hearings where the information available now is sufficient to identify realistic standards. These include brake standards, maximum length restrictions, and the transportation of hazardous loads.

Adopting A New Brake Standard

In 1975, the U.S. NHTSA ordered that all trucks of 20,000 pounds or over be equipped with a revised braking system. The agency found that standards already in existence were dangerously insufficient, creating an obvious traffic hazard.

The first concern of those working on the new standard was the locking of wheels while braking a large truck. Another concern was the braking distance allowed for trucks. The regulations covering brakes include specifications of the number of feet within which a vehicle must stop when travelling at different speeds. The stopping distances allowed for trucks in the United States before 1975 were over double those for the passenger car. The NHTSA researchers suspected this created a potential hazard. When studying accident data, they found that trucks were involved in rear-end collisions with other vehicles more than twice as often as would be expected from their numbers on the road. They concluded that this was a direct result of the longer braking distance standards.

With these concerns in mind, NHTSA introduced the new "121" brake standard, which has both an anti-lock brake requirement and reduced braking distances.

§ The new brake is controlled by what is essentially a mini-computer that monitors the speed at which the wheels are rotating. If the wheels seem to be slowing down too quickly, so that they will stop rotating while the vehicle is still in motion, the computer releases some of the air pressure to the brake, preventing the wheel from locking, and allowing the driver to steer while braking

§ The new standard for allowable braking distance is about half the previous stopping distance, and only 10% greater than that for the passenger car.

It is estimated that the new 121 standard will add \$1,500 to the cost of a \$30,000 truck.

The federal government of Canada has refrained from adopting the 121 standard. The reliability of the anti-lock system has been questioned. Some early design problems were serious enough to necessitate disconnection or removal of these systems. There is still no absolute certainty that the anti-lock brake will live up to the expectations it has raised. Federal authorities argue that there could be problems with the new brake in the Canadian climate. The new air brake is locked on the axle, thus leaving it exposed to snow and frost, and there is some question whether it will operate successfully under these conditions. Despite their reservations, federal authorities have not forbidden the use of the new brake as an optional component while awaiting the results of a 100,000-vehicle study comparing the performance of new and old braking systems. They hope to make a final decision about adopting the 121 standard in 1978.

Although the federal standard-setting authorities have hesitated, there is convincing evidence that the 121 system has a better performance record than the pre-1975 brakes.

§ Burlington Company in the U.S., which keeps computerized repair records for the large fleets it services, undertook a study to compare the two braking systems. The company concluded that the accident rate of large commercial carriers with anti-lock brakes was approximately half that of similar vehicles not equipped with this system, and attributed the improved collision record to the new braking system

§ While the experts who appeared before the Committee had more reservation about the anti-lock system, they agreed that the 121 brake constitutes an improvement over old braking systems. They endorsed the theory on which the new system is based as important to enable a truck to perform safely in all situations. For example, Dr. John Ellis of the Cranfield Institute of Technology voiced his doubts about the system, but concluded by saying:

"The actual mechanical designs are a considerable step forward, particularly on the trailer, in safety and in reliability on brake operation, and in actual brake demands".

The hesitation on the part of the federal government to make the 121 brake standards mandatory is no longer warranted. Although the system is still being improved, its safety record is significantly better than that of the standard now in existence. Confidence in the anti-lock system is growing. For example, although it is not compulsory in Britain, all large fleet operators have voluntarily adopted its use.

From the provincial point of view, it is particularly important that the federal government move in this area. Because anti-lock systems are allowed as an option, a dangerous situation has arisen. Some operators have equipped one section of the vehicle to the new standard (e.g., the tractor) while continuing to use the old brake system on another (e.g., the trailer). This decreases the effectiveness of both the old and the new brake.

This situation should not be allowed to continue. The evidence is clear enough for action.

Accordingly, the Committee recommends that:

RECOMMENDATION VIII-4: THE GOVERNMENT OF ONTARIO SHOULD URGE STRENUOUSLY THAT THE FEDERAL GOVERNMENT ADOPT THE U.S. 121 BRAKE STANDARD FOR TRUCKS.

Maintaining A
Safe Length
Limitation

The length limitation for commercial carriers in Ontario is 65 feet. This limitation is based upon experiments carried out in the U.S. to determine optimum length. The resulting recommendation for 65 feet took into account safety issues, the effect of truck length on other vehicles and overall economic considerations.

The safety criteria for establishing vehicle length include the stability of the vehicle carrier and the effect on its stopping ability.

- § If trailer length is increased while the existing tractor length is maintained, the likelihood of mismatch between the two units, and an unstable and therefore unsafe configuration, is increased
- § An overall increase in length will affect the aerodynamics of the truck. A longer vehicle has greater cross-wind sensitivity and susceptibility to wind currents on exposed stretches of the highway. This will cause greater difficulty in holding a straight line, and possibly introduce dangerous oscillation of the rear units
- § A longer vehicle is able to carry more goods, but how this extra weight will affect stopping ability is unknown. The belief is that the greater the weight, the more extensive the demand on the braking system. Locking of the wheels or brake failures may result.

To minimize conflicts in the general traffic scene, all vehicles must be able to integrate in with traffic without causing undue difficulties. There is evidence that a longer truck increases the complexity of the driving task for other vehicles.

§ It is known that multi-section trucks of 65 feet encroach on other vehicles' space, particularly in the urban road environment. A vehicle of 72 feet would have greater difficulty manoeuvring at slow speeds and would have to absorb more space to accomplish its manoeuvre

§ The time and space needed to pass a long truck combination on the highway already constitute a problem. Passenger cars have difficulty seeing oncoming traffic, estimating the time they require to pass, and accomplishing the manoeuvre safely. Increasing the length of the truck would aggravate these difficulties

§ A longer vehicle, bearing more weight, would have greater difficulty making inclines. The result of extending the 65-foot limit would be to slow the traffic flow on the highways.

Economic considerations are often set against safety concerns, as this report has noted. In the case of length limitations for vehicles, one side of the issue supports what seem to be the dictates of safety, while the other opposes it.

§ If wear and tear on tires and roads is used as the basic criterion, it is argued that lengthening the vehicle will inflate demands, and is therefore inadvisable. The greater the weight, the more damage can be done to both tires and roads

§ If the economic transportation of goods is used as justification, it is obvious that it is advantageous to enable the carrier to transport as much as possible in each run. From this standpoint, it makes sense to increase vehicle length.

The Committee learned that no state in the U.S. allows commercial vehicles to exceed 65 feet, but the same cannot be said of all the Canadian provinces. Manitoba, for example, has a length limitation of 72 feet, and when a 72-foot carrier from Manitoba reaches the Ontario border, it must meet the Ontario length limitations. It has been suggested that one solution adopted to overcome this problem is to shorten a 72-foot vehicle to 65 feet, by moving the fifth wheel position forward, or shortening the tow bars. This would seriously jeopardize the stability of the vehicle. However, the Committee heard no concrete evidence that this dangerous procedure was being carried out at the Ontario border. Many interprovincial truckers told the Committee that they only run vehicles that meet the maximum length regulation allowed in the different provinces that they will be travelling through.

After considering these issues, the Committee must observe that it is impossible to state without qualification that 65 feet is far safer than 72 feet. A great deal depends on the specific vehicle, that is, its configuration, gross weight, axle weight, loading, etc. Nevertheless, it is clear that the weight of evidence lies on the side of retaining the shorter length limitation. The groups that appeared before the Committee supported this position. The body that stands to benefit most from a length extension, the Ontario Trucking Association, did not press for an increase. The public voiced concern about the units of 65 feet on the road, and were fearful of longer and larger vehicles. Ministry officials could not find ample justification for recommending an increase.

The Committee wishes to note as well that it could find no grounds for recommending a decrease in present length limitations, as members of the public demanded. The Committee, taking into account all sides of the question, considers the current 65-foot restriction realistic.

Accordingly, the Committee recommends that:

RECOMMENDATION VIII-5: THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD MAINTAIN THE CURRENT 65-FOOT LENGTH LIMIT FOR TRUCKS TRAVELLING ON ONTARIO ROADS.

Regulating
Hazardous
Loads

Hazardous loads are regulated under provisions of The Highway Traffic Act. The Act gives the right to make regulations classifying and defining explosives and dangerous materials; regulating and prohibiting their transportation; regulating the preparation and packaging of these materials; and, requiring the labelling of packages and containers of explosives and dangerous materials, as well as the form these labels should take.

Although this legislation was passed in 1958, the only area in which the Province has put regulations into effect is labelling. Regulation 412 of the Act deals with the placarding of dangerous loads. Every commercial vehicle transporting flammable liquid or solid, corrosive liquid, oxidizing material, compressed gas or poison must bear a sign on the rear and sides containing the word "dangerous", "compressed gas" or "poison" as well as the words "flammable", "acid" or "corrosive liquid" where applicable.

The Committee found that there is widespread discontent with this labelling system. It is considered to be seriously deficient in protecting the public. It is contended by some that commodities that must be labelled are often less dangerous than others that escape attention. And that situations may develop in which even the driver is unaware of the hazardous characteristics of the load he is carrying. If an accident occurs, he cannot warn emergency forces of the special handling his cargo might require.

There are two major problems that have delayed resolution of the problems of labelling hazardous loads.

§ Regulation 412 does not apply to materials covered by two other acts affecting the transportation of hazardous loads within Ontario - the provincial Gasoline Handling Act and the federal Explosives Act. The potential overlap between the regulatory powers of these Acts has created jurisdictional confusion

§ Labelling requirements for hazardous loads vary widely from one province to another. The lack of uniformity has led to confusion about what the assorted dangerous commodity labels actually signify.

The federal government has been working in this area for several years. Its goal is to develop a set of regulations for the transportation and labelling of dangerous loads for all modes of transportation across Canada as guidelines for a national system that it hopes the provinces will adopt. The federal guidelines would, of course, cover trucking operations.

Ottawa has delayed decisive action because of the complexity of the situation. It has been examining American and international standards, which again often do not coincide. Meanwhile, the provinces have hesitated to enact regulations while waiting for the federal government to take the initiative.

At the Committee's hearings, the Ministry of Transportation and Communications, the Ontario Trucking Association, the Ontario Petroleum Association, police and fire departments, and the Ontario public all supported the need for action. The Ontario Trucking Association expressed its conviction that it had "established a sound base and receptivity for preventative legislation and adherence" among its members.

The Committee sees no reason for further delay. A complete body of information appropriate for North American driving conditions is available. Ontario acquired the right to determine its own regulation system nearly 20 years ago. If the federal government delays the announcement of its proposed regulations, Ontario should act unilaterally to adopt a comprehensive set of regulations covering both the transportation and the labelling of hazardous goods.

Accordingly, the Committee recommends that:

RECOMMENDATION VIII-6: THE GOVERNMENT OF ONTARIO SHOULD PRESS THE FEDERAL GOVERNMENT FOR EARLY INTRODUCTION OF NATIONAL REGULATIONS FOR THE TRANSPORTATION AND LABELLING OF HAZARDOUS LOADS. IF NATIONAL REGULATIONS ARE NOT FORTHCOMING WITHIN 12 MONTHS, THE GOVERNMENT OF ONTARIO SHOULD UNILATERALLY IMPLEMENT ITS OWN.

ENSURING PROPER MAINTENANCE

The last step in improving truck safety involves maintenance of the vehicle. It is essential that a monitoring process be introduced to ensure that truck operators comply with regulations - those in existence and those to be introduced - on an ongoing basis. This final part will cover the steps needed to ensure that a proper maintenance program is created.

Motor Vehicle Inspection

The truck is a conglomerate of delicately balanced components, all of which receive extensive wear. Large fleet operators have found that their trucks require consistent attention to remain roadworthy, and have developed regular repair programs. For example, all members of the Ontario Petroleum Association regularly replace such parts as fifth wheel angles, plate mounting bolts, locks and hinge pins, king pins, hitch mounts, and draw bar hinges on all their vehicles. They have found that the defect rate in these pieces of equipment after six months' to a year's use justifies their routine replacement.

Researchers, government personnel and industry people agree that large fleet operators maintain their vehicles more carefully than other operators. This was the major conclusion of a 1973 MTC survey on vehicle inspection. The study compared approximately equal numbers of private carriers and big company trucks. When the charges laid for violations of The Highway Traffic Act were studied, it was found that privately owned trucks had defects of a far more serious nature. These included fifth wheel defects and air brake deficiencies, which could seriously jeopardize safe performance.

The large companies that have voluntarily introduced ongoing inspections of their fleets are not under any government compulsion to do so. In Ontario, the only commercial carrier that must be routinely inspected is the dump truck. Other commercial vehicles are inspected on a random basis. In 1976, of approximately 126,000 vehicles over 10,000 pounds in the province, 16% were selected for inspections.

The random truck inspection usually takes place at weigh stations. It involves a detailed check of the truck and its components. At the end of each inspection, the inspector submits a written report to the Ministry.

The dump truck inspection program was necessitated by government concern over the safety record of these vehicles. The results of the dump truck program have provided excellent justification for an extension of the commercial vehicle inspection program.

Dump trucks must be inspected by a certified Class "A" mechanic twice annually, and given a certificate of fitness. Inspectors from the Ministry also check the truck biannually, to guarantee that the original inspection was done properly.

Since the inception of this program, there has been a major decrease in dump truck mechanical defects and the safety record of these trucks has improved significantly.

The Committee was often urged to recommend universal periodic inspection of commercial vehicles. The Ontario Trucking Association strongly supported biannual inspection, stating that the wear rate of truck components necessitates this kind of program. Expert witnesses and the public supported the position of the OTA.

The MTC is currently in the process of considering an extension of its present commercial vehicle inspection system. The evidence justifies an extension. Large fleet owners have already recognized this need, and have acted on it. The success of the dump truck inspection program indicates the potential benefits of such a program.

The MTC should introduce a biannual inspection for all commercial vehicles along the lines of the dump truck system. This would have the advantage of making the program largely self-supporting. Rather than attempt a universal inspection of all commercial vehicles at once, the program could be implemented on a phased basis. The Ministry should decide the priority list, and gradually extend the system, inspecting those vehicles with the poorest safety record first.

Accordingly, the Committee recommends that:

RECOMMENDATION VIII-7: THE GOVERNMENT OF ONTARIO SHOULD EXTEND THE DUMP TRUCK INSPECTION PROGRAM ON A PHASED BASIS TO ALL COMMERCIAL CARRIERS.

BASIC TRUCK CONFIGURATIONS

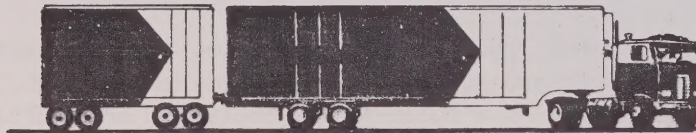
STRAIGHT TRUCK



TRACTOR-TRAILER

OR

TRACTOR & SEMI-TRAILER



TRACTOR-TRAILER
AND
PUP TRAILER

TRUCK
AND
TWO PUP TRAILERS



TRIPLE
COMBINATION
OR TRAIN

SECTION IX

THE ROAD

Earlier sections of this report dealt with two important factors in road safety: the driver and the vehicle. This section is concerned with the third, the road environment, which includes all of the physical factors associated with a road: the basic design and construction, the condition of the road surface, lighting and signs, and roadside objects.

Accident investigation studies have found that poor road design and roadside hazards are significant factors in the frequency and severity of accidents. Poor design of the road itself not only increases the chance of a situation developing that the driver cannot handle, but can also be the direct cause of an accident. Moreover, roadside hazards such as unprotected bridge abutments, large trees or rigid light poles can increase the severity of damage suffered.

§ The intensive study in Monroe County, Indiana, by the U.S. Department of Transportation concluded that 18% of the collisions investigated were definitely caused by environmental factors, and that environmental factors were a probable cause of another 13%

§ In England, the Transport Road Research Laboratory estimated, after studying 1,164 accidents in detail over a four-year period, that the road environment was a contributing factor in 28% of the accidents investigated

§ The accident rate is higher on inferior classes of roads. For example, in 1975, the accident rate per million vehicle miles in Ontario ranged from a low of 1.7 on freeways to 2.8 on King's highways, 3.8 on secondary highways, and 7.8 on "other" roads.

Improving roads and the surrounding environment is justified as both a preventive and a protective measure. Like the vehicle, the road is a physical factor that may be more amenable to change than the human being. A well-designed road reduces the potential for human error and for injury on impact, offering a degree of protection for those drivers who will continue, no matter what training and vehicle safety programs are implemented, to behave unsafely, make mistakes and have accidents.

This section discusses some of the improvements that can be made in road safety by making the road and its surrounding environment safer and by managing the flow of traffic effectively.

MAKING THE ROAD ENVIRONMENT SAFER

The overall goal of road design is to make the driving task simple and predictable, and to minimize damage if an accident occurs. Several factors in road design influence the driving task. For example, road design can keep to a minimum conflict situations created by intersections or other direct entrances to the road, such as driveways. It can also simplify driving by encouraging a free flow of traffic at relatively uniform speed.

Two approaches to making roads safer are discussed below. These are the improvement of "black spots" - the redesign of stretches of the road where accidents occur with undue frequency - and "roadside hazard modification" - the removal or reduction in the number of fixed, inflexible roadside obstacles. In both of these areas, the Committee found that Ontario has well-developed programs.

Eliminating "Black Spot" Problems

Development of a "black spot" improvement program is a complex process, requiring priority setting and careful study of the sections of the road where accidents occur with greater frequency than would normally be expected.

§ A decision must be made on the major criterion for hazard.
For example, a black spot improvement program might focus on:

- A high incidence of fatal accidents, because of their human cost and the public's concern, or
- Property damage accidents only, as offering perhaps a greater cost-benefit payoff

§ The danger spots must be identified and classified to determine the scope of the program:

- Accident records are studied to establish actual danger spots
- The accident data are classified by type of road (e.g., uncontrolled access, controlled access, two-lane, multi-lane, undivided) and type of hazard (e.g., steep grade, poor surface) to identify areas of potential problem for each road classification
- A decision is taken on how extensively to apply the program (for example, to actual danger spots on most-travelled roads, or to potential danger spots with certain characteristics on all roads of a particular type or types)

§ The nature of the design problems at the sites chosen for improvement must be determined. A multi-disciplinary accident team is required to make this determination.

The process of developing a black spot program is costly. In addition, extensive reconstruction is often needed, which may be difficult to justify on a cost-benefit basis. Also, too little is known as yet about what the priorities for design changes should be. Nevertheless, there is ample proof that once specific design solutions are found, changes in particular stretches of road can achieve substantial savings in lives and property.

Ontario has a well-developed black spot program. A section of the Ministry of Transportation and Communications analyzes accident data continuously to identify sections that warrant immediate attention. It then sends out personnel to study the design problems at those locations, and to specify particular corrective measures that should be taken. After studying the recommended measures, the program group assigns priorities for change, using a cost-benefit approach.

While the Ontario program essentially works well, one black spot problem was raised often at the Committee's hearings as a particular public concern - that of railway level crossings. As of March 30, 1976, Ontario had 382 railway crossings on King's highways, secondary highway or tertiary roads, all of which are under the jurisdiction of the Ministry, rather than the municipalities in which they are located. Of these, 54 had neither flashing lights nor gates. The justification for not installing automatic signal protection at the unmarked crossing is the low volume of trains or motor vehicle traffic. In many such areas, the public believes that these unmarked crossings are definite safety problems for their communities. The Committee believes that where the volume of train traffic is too small to justify a flashing light signal, a community should be able to request that an inexpensive stop sign be posted.

Accordingly, the Committee recommends that:

RECOMMENDATION IX-1: THE MINISTRY OF
TRANSPORTATION AND COMMUNICATIONS SHOULD
AMEND ITS STANDARDS FOR THE LOCATION OF STOP
SIGNS TO ALLOW THEIR ERECTION, AT THE REQUEST
OF A MUNICIPALITY, AT RAILWAY LEVEL CROSSINGS.

The potential hazard of the crossings that are not marked by flashing lights is compounded by the difficulty of seeing a train as it proceeds through a crossing at night. Although the front of the train is lighted to warn of its approach, the rest of the train has no lights, and is thus largely invisible on a poorly lit stretch of road. As a result, drivers can literally run their vehicles into the sides of trains as they pass through crossings at night. Obviously, this aspect of the crossing problem could easily be rectified if trains were more clearly marked. A simple strip of reflectorized paint would help to alleviate this visibility problem.

Accordingly, the Committee recommends that:

RECOMMENDATION IX-2: THE GOVERNMENT OF ONTARIO SHOULD URGE THE FEDERAL GOVERNMENT TO MAKE REFLECTORIZED MARKINGS MANDATORY ON THE SIDES OF ALL RAILCARS.

Modifying Roadside Hazards

Accident data show that roadside hazards are a serious problem. In Ontario in 1975, there were 17,274 personal injury accidents and 480 deaths from single-vehicle accidents, where the vehicle usually collides with something on the roadside.

Technology can successfully counteract or modify roadside hazards. For example:

- § A barrier that has the right balance of flexibility and stability will redirect a colliding vehicle - smoothly and at a low angle of deflection - back onto the roadway and into the ongoing rather than the opposing stream of traffic
- § Lighting poles and signposts - necessary hazards on the side of every road - do less damage to an impacting vehicle if they are flexible and energy absorbing.

Ideally, consideration should be given to modifying or removing and replacing all fixed roadside objects with more flexible and energy-absorbing devices. But the massive cost of wholesale action makes it impossible to implement such a sweeping program. Priority setting based on careful study is required.

Ontario has done extensive work on roadside hazard modification, and its program is well developed. For example:

- § MTC has determined that a three-strand wire barrier is the most desirable from the standpoint of flexibility and stability. It is gradually introducing the three-strand wire barriers along the sides of all highways, beginning with relatively hazardous locations, such as the edges of steep curves or downhill grades

§ MTC has adopted a lightweight breakaway post for lighting and signage to replace the heavy fixed pole. With a breakaway structure, the pole comes away from its support, clearing the top of the vehicle, causing markedly less damage than a fixed pole.

The Committee found that a new safety design for poles has been developed in Sweden. The Swedish authorities have developed what they call a "wrap-around pole", which bends around the vehicle on impact, rather than just breaking away. The wrap-around feature actually slows down the crashing vehicle and prevents it from colliding with other structures or vehicles or pedestrians. The "wrap-around" pole is still in a developmental stage but it could prove to be a significant advance.

Accordingly, the Committee recommends that:

RECOMMENDATION IX-3: THE MINISTRY OF
TRANSPORTATION AND COMMUNICATIONS SHOULD
EVALUATE THE SAFETY POTENTIAL OF THE
WRAP-AROUND POLE.

MANAGING THE FLOW OF TRAFFIC

Effective management of traffic, like good road design, minimizes the difficulty and hazard of the choices the driver must make. One important aspect of traffic management is setting appropriate speed limits, to maintain a consistent flow. Another is providing warnings of changes in weather conditions, a particular concern in a province where weather changes can be abrupt and severe.

Maintaining A Consistent Flow

In 1976, Ontario lowered speed limits on its freeways and highways. This move was dictated by safety as well as energy supply considerations. The U.S. Highway Needs Study suggested that, along with mandatory seat belts, lowering speed limits was the road safety measure with the greatest potential for saving lives. This conclusion was reinforced by several witnesses who appeared before the Committee.

The police suggested to the Committee that since the new speed limits have been in effect, the overall speed on the highway has dropped. Although all drivers do not keep to the 60 mph limit, the police believe that the average speed for all vehicles on the road has been reduced. Further, the police testified that the traffic flow is more even, with trucks and automobiles moving along at closer to the same speed.

As suggested previously, there has been a substantial saving in human lives since the new speed limits and the mandatory seat-belt law were introduced. The toll of deaths on the road in Ontario dropped from 1,800 in 1975 to just over 1,500 in 1976 - a 16% reduction. There is little doubt that the drop in the overall average speed has contributed in a major way to this saving.

Accordingly, the Committee recommends that:

RECOMMENDATION IX-4: THE GOVERNMENT OF
ONTARIO SHOULD MAINTAIN THE LOWERED SPEED
LIMITS EVEN IF ENERGY SUPPLY CONDITIONS EASE.

Dealing With Weather Conditions

All of the problems associated with driving are complicated by poor weather. For example, a basically "safe", well-designed stretch of road becomes treacherous and unsafe if it ices over. Dark, wet roads greatly increase the possibility of accidents. Ontario drivers often face serious problems on the road because of poor weather, particularly during the Province's rigorous winters when weather changes frequently, and it is not uncommon for a motorist to drive without prior warning from clear conditions into a two or three-mile storm. In addition, some areas of the Province are plagued by poor weather and visibility problems throughout the year.

Given the climatic conditions in Ontario, and their accident-producing potential, it would be helpful if drivers were warned in advance of conditions on the road ahead. One way of warning drivers is through a "conditions ahead" warning system. Automatically controllable signs could be erected on very heavily travelled highways that are particularly prone to hazardous weather conditions such as

heavy local fogs, road icing or blizzards. The signs would be activated by MTC personnel as dangerous conditions develop. This would allow time for the driver to adjust his driving accordingly or, in difficult situations, perhaps to pull over to the side to "wait out the storm".

Accordingly, the Committee recommends that:

RECOMMENDATION IX-5: THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD INVESTIGATE THE FEASIBILITY OF INTRODUCING A "CONDITIONS AHEAD" WEATHER WARNING SYSTEM.

THE HIGHWAY IN ONTARIO

Ontario's highways compare favourably with highways anywhere in the world. In each jurisdiction the Committee visited, Ontario was recognized as being a leader in highway design. Whatever approaches to safer highway design the Committee investigated, it found MTC already taking an active interest. Whether the problem was black spot identification, and modification of roadside hazards, or particular problems of lateral stability, drainage of the roadway, embankments or fill slopes, the Ministry was aware of the most recent technology and was involved in investigating safety-related issues.

Although there are areas in which the Ministry is moving somewhat slowly, in general, it has an excellent record. Ontario's highways are considered a model for other jurisdictions.

Accordingly, the Committee recommends that:

RECOMMENDATION IX-6: THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD BE COMMENDED FOR ITS EFFORTS TO CREATE A SAFELY DESIGNED HIGHWAY SYSTEM, AND SHOULD BE ENCOURAGED TO CONTINUE ITS EFFORTS IN THIS REGARD.

SECTION X

ADMINISTRATION AND RESEARCH

Road safety is a particularly difficult area of public policy to organize because it involves many different public and private concerns. Participants in a comprehensive road safety program should include among others the school system, the health care system, the commercial transportation industry, the police, courts and correctional institutions, the motor vehicle manufacturers in North America, Europe and Japan, as well as road planners and builders. Each has a distinct part to play.

Because road safety touches so many concerns, it involves governments at all levels.

§ At the international level, the United Nations is involved in establishing uniform vehicle standards, road signs and labelling of hazardous materials

§ Nationally, the Ministry of Transport sets standards for all vehicles manufactured in or imported into Canada

§ Provincial governments have jurisdiction over licensing, policing and highway construction

§ Municipal governments are concerned with local traffic laws, policing, road building and transportation of school children.

With so many public and private interests involved in road safety, it is clearly unrealistic to contemplate bringing together in one place all responsibility for administration and research. Instead, the Committee dealt with the coordination of these responsibilities at the provincial level, and concerns itself in this section with means of establishing a point of focus within the provincial government and ensuring that the benefits of research are fully exploited.

ESTABLISHING A POINT OF FOCUS WITHIN THE PROVINCIAL GOVERNMENT

At the Committee's request, eight provincial ministries whose programs and activities have a direct bearing on road safety - Transportation and Communications, Health, Education, Colleges and Universities, Attorney General, Solicitor General, Correctional Services, Consumer and Corporate Relations - appeared at its hearings. The Committee did not attempt to search out all the ministries that might have some part to play. A more complete list might have included Treasury, Economics and Intergovernmental Affairs on its relations with municipal authorities, Housing on its potential impact on the road and traffic design of new residential communities, Industry and Tourism on the movement of goods and development of the manufacturing industry, and certainly the new Ministry of Northern Affairs on the special problems of northern roads. In fact, almost every ministry of government can in some way contribute to or detract from road safety (although some, of course, have a more direct concern than others). The Committee believes that a point of focus for road safety concerns should be identified within the government structure for three reasons: there are problems of interministerial coordination; other jurisdictions have demonstrated the usefulness of a coordinated approach; and, many of the new initiatives of this Committee will require a coordinated approach.

Clarifying the Ministries' Responsibilities

The absence of any point of central concern for road safety may have contributed to some of the problems identified by the Committee. Difficulties seem to arise when a new initiative is developed in one ministry but administered in another, when responsibility for a program moves from one ministry to another, or when a problem is a shared concern of several ministries.

Most often, MTC is the agency that identifies new concerns in road safety and initiates new approaches, but it is not always easy to identify the responsibility for follow-up, and worthwhile programs may fail as a result of differing priorities. For example:

§ MTC initiated several programs to increase seat-belt usage in Ontario. The Ministry pressed the federal government to intensify its seat-belt wearing program, and Ottawa responded with an advertising campaign that stressed the benefits of seat-belt usage. Then, through MTC, Ontario became the first North American jurisdiction to enact a seat-belt wearing law. Finally, MTC has conducted regular surveys to ascertain the level of seat-belt usage and the effect of various components of the seat-belt program. The effect of these measures was an increase in usage from the 20% to 30% "normal range" in North America, to a 30% to 40% range with heavy advertising, to a peak of almost 80% immediately after the seat-belt law went into effect

§ Since then, the level of seat-belt usage has been declining steadily, however, and it is not apparent where the responsibility lies

- Is MTC responsible for increasing seat-belt usage or just for ensuring the passage of the law?
- Is the Solicitor General responsible for seat-belt usage or just for seeing that the law is enforced reasonably?
- Is the Attorney General responsible for ensuring that the intent of the law (i.e. a high level of usage) is being met, or just for the prosecution of the summons issued by the police?
- Who is responsible for determining whether the current law is in fact enforceable and what constitutes a reasonable enforcement level?

The Committee found no answer to these questions.

Even when responsibility for a program appears clear-cut, the transfer of responsibility from one ministry to another may be followed by failure to give continued attention to the need to evaluate and revise the program. For example:

§ MTC took the initiative in getting driver training into the school system. When the Ministry of Education eventually agreed to help fund the courses, MTC kept responsibility for developing the curriculum and teaching materials, arranging for cars, providing a summer training program for teachers, and generally encouraging school boards to make the courses readily available. In 1975, following the report of a task force chaired by the Ministry of Education, it was agreed that total responsibility for the program would be transferred to the Ministry of Education. MTC ceased to develop new teaching materials and dropped its regional consulting service to school boards, while the Ministry of Education assumed responsibility for the teacher training program

§ During the past several years, however, new developments have occurred in driver training. As reported in Section II, North American driver training authorities now agree that driver training in the school system has not produced a measurable improvement in the accident and conviction rates of young drivers. In other jurisdictions, older approaches to driver training are being rigorously evaluated, and many new approaches are being tried. This activity is being neglected in Ontario: MTC is interested but does not have the responsibility; Education has the responsibility, but gives driver education a lower priority than many of its other activities.

As well, several ministries may be vitally concerned with a particular problem, but by failing to coordinate their activities adequately, they hinder the Government's ability to effect a solution. For example:

§ Drinking and driving is a central concern of many public agencies. Alcohol abuse is a major concern of the health agencies. The approximately 10,000 drivers convicted annually of second drinking-driving offences are a significant client group of correctional institutions, and are part of a larger group in those institutions whose problems are related to alcohol. The police, MTC and officials of the Attorney General's Ministry are concerned with the close relationship of alcohol to fatal collisions, the prevalence of drinking and driving and the problems of apprehending and convicting impaired drivers

§ But, even with so many ministries deeply concerned, it is apparent that many problems are not dealt with for lack of overall responsibility:

- Who is responsible for the failure to allocate sufficient funds to equip the police to apprehend a critical number of drinking drivers?
- Who is responsible if problem drinkers among convicted drinking drivers are not identified, and no remedial action is therefore taken?
- Who is responsible for the marked increase in serious collisions involving young drivers?

In fact, the Committee found that the Government has struck interministerial committees to deal with problems relating to drinking and driving. The committees have done good work, but the Government has not assigned responsibility for acting on findings contained in their reports.

Coordinating Road Safety in Other Jurisdictions

Every jurisdiction has the problem of coordinating a road safety program among a variety of agencies and interests. Each of the other jurisdictions the Committee visited - Sweden, The Netherlands, Great Britain and the United States - designates an agency to provide overall coordination, and even in some cases management, of road safety programs.

§ Sweden has a road safety authority with responsibility for driver education, testing and licensing, public information, vehicle standards and overall safe road design. It represents the highway safety concern to the police and highway construction agencies

§ The Netherlands has a coordinating group within its Ministry of Transport with responsibility for developing a road safety program to be executed by other agencies

§ Great Britain retains road safety responsibility within its Ministry of Transport, which works with police and other interested officials

§ The U.S. National Highway Traffic Safety Administration combines responsibility for vehicle standards with driver and pedestrian programs, and works with the Federal Highways Administration. The NHTSA tries to get each state to designate a highway safety coordinator as a first step in putting together and then managing an overall state highway safety program.

Thus each of the jurisdictions visited by the Committee has designated one agency to take overall responsibility for road safety programming, although each jurisdiction recognizes that various aspects of the program will be managed independently.

Taking the New Approach That New Initiatives Demand

Even if Ontario's current, basically uncoordinated approach to road safety were adequate (and some might argue that Ontario's relatively good record is testimony that it is), a new approach would be justified. This Committee has made recommendations in eight different areas to make Ontario's roads safer. Some of the recommendations involve a new regulation or discrete piece of legislation that will be relatively easy to implement. Others, such as the new approach to trucking, can be effectively carried out through MTC. However, some of the most important recommendations demand the closely coordinated activity of several ministries. The new school bus standards and the new approach to driver education, for example, will have to be developed between MTC and the Ministry of Education. The comprehensive approach advocated for dealing with drinking drivers will require very close cooperation between many provincial ministries.

Ontario must bring road safety efforts together in a coordinated program, with a visible point of focus. This point of focus should be a road safety coordinator, located in the Ministry of Transport and Communications. That ministry has been selected because it has overall responsibility for drivers, vehicles, and roads, and keeps data on roads and accidents. The coordinator should be given a prominent position, reporting to the Deputy Minister, in order to have the proper access to other ministries as well as authority in dealing with other MTC officials.

The coordinator should chair an Interministerial Committee on Road Safety to ensure that all involved ministries are aware of the importance of their responsibilities in the overall road safety program. And, the coordinator should serve as a point of contact with the many outside groups with a vital interest in road safety. Since these programs will all be carried out by existing parts of government, the coordinator will require only a small planning staff.

Accordingly, the Committee recommends that:

RECOMMENDATION X-1: THE GOVERNMENT OF ONTARIO SHOULD APPOINT A ROAD SAFETY COORDINATOR REPORTING TO THE DEPUTY MINISTER OF THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS TO DEVELOP AND COORDINATE THE OVERALL ROAD SAFETY PROGRAM WITHIN THE GOVERNMENT STRUCTURE, BE A POINT OF CONTACT WITH INTERESTED GROUPS OUTSIDE THE GOVERNMENT, AND MONITOR ROAD SAFETY ACTIVITY THROUGHOUT THE WORLD.

One specific area that the road safety coordinator could be responsible for is crash rescue. Currently, rescue work is carried out by local fire departments or volunteer rescue groups. There is no provincial program or point of contact within the provincial government for financial or other assistance for rescue work. This gap may deprive the less populated areas of the benefits of advances in rescue equipment. For example, the Hamilton Fire Department demonstrated for the Committee the effectiveness of a very sophisticated mechanical rescue tool that can actually cut a vehicle open within a very few minutes to free a trapped victim. While this type of equipment is rarely needed and far too expensive to be purchased by most municipal fire departments or local rescue groups for use in their own limited area, it may make sense to deploy several such rescue tools across the Province for use on a regional basis. But this would have to be undertaken as part of an overall provincial program developed and administered by a responsible official.

Accordingly, the Committee recommends that:

RECOMMENDATION X-2: THE GOVERNMENT OF ONTARIO SHOULD ASSIGN RESPONSIBILITY FOR DEVELOPING A PROVINCIAL CRASH RESCUE PROGRAM TO THE ROAD SAFETY COORDINATOR.

GAINING THE FULL BENEFIT FROM RESEARCH

The Committee was impressed throughout the hearings with the need for continuing research on road safety. Throughout this report, the Committee has made frequent reference to areas that require study in order to improve road safety. For example:

- § Improvements through driver education await the results of ongoing research into various improved curricula and teaching systems
- § Improvements in vehicle handling through new vehicle standards cannot be made until an objective method of describing and measuring vehicle handling is developed
- § Improvements in police effectiveness depend upon more precise information on the kinds of driving behaviour and driving situations that cause accidents and are amenable to police intervention

The need for research, for more information, on the large societal problem of road safety is apparent and compelling.

The Committee was impressed, however, by the amount of research that is already being conducted. In Europe and the United States, the Committee visited a number of centres, several with sizeable physical facilities, that were dedicated to road safety research. During its hearings, the Committee was able to find a body of expert opinion backed up by substantive research on every one of the eight major topics that it undertook to investigate. This part of the report reviews the research activity that Ontario can draw on, and recommends the research approach the Province should take.

Tapping the International Research Pool

The nature of road safety is such that research is extensively shared. Road safety is a concern of all the motorized nations of the western world, and the specific problems that give rise to this concern are common to all, including: the high accident involvement of

young drivers; the special problems of drinking and driving; the re-design of vehicles to help in crash avoidance and minimize the loss when accidents do occur; and, the most effective way to use highway construction funds. Further, there is no competitive or proprietary advantage in withholding solutions to these common problems. Thus Ontario can draw on a large international research pool.

Several agencies draw together and disseminate research internationally:

- § The United Nations, through the Economic Commission for Europe (ECE), plays a substantial role in coordinating ground transportation generally in Europe. On specific issues, such as labelling of hazardous cargo or vehicle standards, the ECE pulls together the research of its members and their current activity
- § The Organization for Economic Cooperation and Development (OECD) has a program of coordinating and disseminating information in road safety. The OECD chooses a particular topic and surveys the practices and research of countries with extensive road transportation. The organization then makes this information widely available through the publication of what becomes an authoritative document on the topic. Recent publications have covered enforcement, driver training and safety information campaigns
- § The North Atlantic Treaty Organization (NATO) has chosen road safety as one of the non-military areas into which it is extending its activities. Dr. G.J.S. Wilde of Queens University put together a NATO document on the problem of the drinking driver and the various strategies to reduce the involvement of alcohol in vehicle collisions.

In addition to drawing on the worldwide research, Ontario can also benefit from the vast amount of research being conducted in the United States. The National Highway Traffic Safety Administration, for example, is committed to making the results of its demonstration projects widely available. In addition, the Committee found that several U.S. universities house research institutions dedicated to highway safety, among them the Highway Safety Research Institute at the University of Michigan and the University of North Carolina's Institute of Highway Safety. Ontario's membership in the American Association of Motor Vehicle Administrators keeps the Province abreast of current research developments throughout North America.

Canada does not have a national research institute like those of Sweden, The Netherlands or Britain. Within the federal Ministry of Transport, there is a road safety organization that is becoming increasingly active in researching specific topics and disseminating information. For example, it is funding a demonstration project to test three approaches to driver education in Prince Edward Island. At Mirabel, Quebec, it is constructing a new test facility that will give the country its only capability to do crash-testing of vehicles.

Some research in Ontario is funded through MTC. Most is concerned with various aspects of highway design and construction such as pavement skid resistance, crash barriers, breakaway poles and safety guard rails. Other research is conducted on specific problems that seem to be a special concern in this Province or on data specific to Ontario. For example, this past year MTC conducted research into hitches for large trucks when data showed that hitch failures were a contributing factor in a large number of heavy truck accidents.

Ontario has a good record of implementing new road safety ideas promptly. In so doing it has often been the beneficiary of research funded and carried out in other jurisdictions as well as the research it has conducted to meet a demonstrated need in the Province.

Developing An Approach To Road Safety Research For Ontario

Visits to impressive research institutes in Europe and testimony from experts from research institutes in North America led the Committee to consider the need for a road safety research institute in Ontario. The Committee concluded that a more modest research approach is more appropriate for Ontario than the establishment of an institute and potentially more valuable.

There are three reasons why Ontario need not develop its own research institute or major road safety research program. First, it would be difficult to launch a road safety research program with very much breadth that does not duplicate research being carried out elsewhere. Second, a significant research program would be very expensive, and its results would have national implications. Any major new road safety research activity, such as setting up a multi-disciplinary research

institute, should therefore be undertaken as a national initiative. Finally, the Committee noted that Ontario carries a research load in many other important areas, such as nuclear power development, and there is no need for the Province to feel that it cannot be a recipient of research in one area.

Ontario must continue to make the best use of available research. The road safety coordinator and staff should ensure that the Province is kept aware of promising developments around the world. And the apparently expanding federal research program should be kept relevant to specific Canadian concerns. Ontario should try to influence the federal research program to ensure that it meets predetermined objectives.

Accordingly, the Committee recommends that:

RECOMMENDATION X-3: THE GOVERNMENT OF ONTARIO SHOULD PRESS FOR THE CREATION OF A FEDERAL-PROVINCIAL BODY THAT WOULD SUGGEST PRIORITIES FOR FEDERAL ROAD SAFETY RESEARCH AND COORDINATE ALL ROAD SAFETY RESEARCH ACTIVITIES OF GOVERNMENTS IN CANADA.

The greatest area of need for road safety research in Ontario is in the evaluation of the Province's existing programs. For example, Ontario has a system of interventions - warning letter, interview, suspension - for drivers who have a high conviction rate. That system is valid in concept, but its specific application should be evaluated to ensure that the potential benefits are achieved. As another example, to assess the potential benefit of the reduction in the provincial speed limits, the Committee had to rely on the testimony of an expert from the United States on the effect of the speed-limit reduction there. MTC needs to do its own evaluation.

Accordingly, the Committee recommends that:

RECOMMENDATION X-4: THE GOVERNMENT OF ONTARIO SHOULD GIVE THE HIGHEST PRIORITY IN ROAD SAFETY RESEARCH TO THE EVALUATION OF THE EFFECTIVENESS OF CURRENT ROAD SAFETY PROGRAMS.

Appendices

Appendices

TERMS OF REFERENCE

Ordered, That a Select Committee of the House be appointed to study the overall question of highway safety in all its phases, including the problems associated with drinking and driving, the methods of accident prevention now in general use, driver education in the school system and public education, and to examine and consider any proposals designed to reduce the number of highway accidents submitted to the Committee and to report on methods to achieve greater safety on the highway, and more particularly, such matters as:

- The regulation and control of traffic through enforcement
- Stricter enforcement of the laws that pertain to drinking-driving offences for all ages
- Driver examination and licensing standards
- Driver improvement and rehabilitation, including demerit points system and traffic clinics (North York Traffic Tribunal)
- An assessment of potential benefits of photos on non-counterfeitable driver's licences and methods of implementation and administration
- An assessment of benefits of a vehicle registration and title system
- An assessment of benefits of Ontario's motor vehicle inspection programs
- The transportation of children to and from school and the vehicles and their drivers
- The licensing of driving schools

- Equipment standards for tow trucks
- Operation of multiple vehicle combinations (pup trailers)
- The benefits of the application of a penalty against any person who leaves keys in the ignition lock of an unattended motor vehicle
- The most appropriate type of helmet for moped riders
- And such other matters as may be referred to the Committee by the Minister of Transportation and Communications.

And to submit an interim report to the Assembly not later than September 30, 1976, and a final report not later than December 31, 1976*.

And that the Select Committee have authority to sit during recesses and the interval between Sessions and have full power and authority to employ counsel and such other personnel as may be deemed advisable and to hold meetings and hearings in such places as the Committee may deem advisable and to call for persons, papers and things and to examine witnesses under oath, and the Assembly doth command and compel attendance before the said Select Committee of such persons and the production of such papers and things as the Committee may deem necessary for any of its proceedings and deliberations, for which the Honourable the Speaker may issue his warrant or warrants.

And that the said Committee be composed of thirteen Members, as follows:

Mr. Young (Chairman), Messrs. Bounsall, Breagh, Ferrier, Givens, Johnson (Wellington-Dufferin-Peel), Kennedy, Maeck, McCague, Mackenzie, Nixon, Norton and Riddell.

* - Later extended.

IMPROVING HIGHWAY SAFETY IN ONTARIO:

TOWARD A COMPREHENSIVE APPROACH

Interim Report

from the

Select Committee on Highway Safety

November 1976

TO: The Honourable Russell D. Rowe,
Speaker of the Legislative Assembly of the Province of Ontario:

Sir:

We, the undersigned members of the Committee appointed by the Legislative Assembly of the Province of Ontario on May 25th, 1976, to study the overall question of highway safety in all its phases, including the problems associated with drinking and driving, the methods of accident prevention now in general use, driver education in the school system and public education, and to examine and consider any proposals designed to reduce the number of highway accidents submitted to the Committee and to report on methods to achieve greater safety on the highway; to report to the Legislature on its recommendations, have the honour to submit the attached Interim Report.

Fred Young

Fred Young, M. P. P.
Yorkview
Chairman

Ted Bounsall

Ted Bounsall, M. P. P.
Windsor-Sandwich

Mike Breugh

Mike Breugh, M. P. P.
Oshawa

William Ferrier

William Ferrier, M. P. P.
Cochrane South

Philip Givens

Philip Givens, Q. C., M. P. P.
Armourdale

Jack Johnson

Jack Johnson, M. P. P.
Wellington-Dufferin-Peel

R.D. Kennedy

R. Douglas Kennedy, M. P. P.
Mississauga South
Vice Chairman

Bob Mackenzie

Bob Mackenzie, M. P. P.
Hamilton East

George R. McCague

George McCague, M. P. P.
Dufferin-Simcoe

R. K. McNeil

Ron McNeil, M. P. P.
Elgin

Robert F. Nixon

Robert F. Nixon, M. P. P.
Brant-Oxford-Norfolk

Keith Norton

Keith Norton, M. P. P.
Kingston and the Islands

Jack Riddell

Jack Riddell, M. P. P.
Huron-Middlesex

The Select Committee on Highway Safety

The Legislative Assembly of Ontario

Third Session: Thirtieth Parliament

Members:

Fred Young, M. P. P., Chairman	Yorkview
R. Douglas Kennedy, M. P. P., Vice-Chairman	Mississauga South
Ted Bounsall, M. P. P.	Windsor-Sandwich
Mike Breagh, M. P. P.	Oshawa
William Ferrier, M. P. P.	Cochrane South
Philip Givens, Q. C., M. P. P.	Armoudeale
Jack Johnson, M. P. P.	Wellington - Dufferin- Peel
Bob Mackenzie, M. P. P.	Hamilton East
George McCague, M. P. P.	Dufferin-Simcoe
Ron McNeil, M. P. P.	Elgin
Robert F. Nixon, M. P. P.	Brant-Oxford- Norfolk
Keith Norton, M. P. P.	Kingston and the Islands
Jack Riddell, M. P. P.	Huron-Middlesex

Counsel:	Alan M. Schwartz Siegal, Fogler, Barristers and Solicitors
----------	---

Consultant:	James D. Fisher The Canada Consulting Group
-------------	--

Research Coordinator:	Arna R. Crocker
-----------------------	-----------------

Clerk of the Committee:	Andrew Richardson
-------------------------	-------------------

Liaison Officer from the Ministry of Transportation and Communication:	Harvey D. Mosher
--	------------------

IMPROVING HIGHWAY SAFETY IN ONTARIO:
TOWARD A COMPREHENSIVE APPROACH

TABLE OF CONTENTS

	<u>Page</u>
CHAPTER I - INTRODUCTION.. .. .	1
CHAPTER II - A MANDATE FOR ACTION	4
Public Demand For Leadership	5
Special Interest Groups' Concern For A Wide Range Of Actions	7
European Appreciation Of The Need For Comprehensiveness	8
CHAPTER III - A COMPREHENSIVE APPROACH TO HIGHWAY SAFETY	11
The Wide Range Of Possibilities	12
The Process For Choosing	19
Elements Of The Comprehensive Approach	23
CHAPTER IV - RECOMMENDATIONS FOR IMMEDIATE ACTION	26
Adequate Protection For Moped Drivers	26
Information To Public On The DWI Offences	29
Early Introduction Of Classified Driver's Licences	31
Penalty Imposed For Leaving Keys In Ignition	33
CONCLUSION	35
EXHIBITS	
APPENDICES	

CHAPTER I

INTRODUCTION

Under the Chairmanship of Mr. Fred Young (Yorkview), the Select Committee on Highway Safety has held 40 meetings in Ontario during the five months since its inception. The Committee was established by the Legislative Assembly of the Province of Ontario "to study the overall question of highway safety in all its phases . . . to examine and consider any proposals designed to reduce the number of highway accidents . . . and to report on methods to achieve greater safety on the highway". Exhibit 1 lists the Committee's complete terms of reference.

The Committee was established because highway safety is a major concern in Ontario. In absolute numbers, motor vehicle accidents are the fourth leading killer in the Province (Exhibit 2). Because motor vehicle accidents are a leading cause of death for younger people - 46% of those killed in 1975 were under 25 - it ranks second in potential years of life lost to society (Exhibit 3). Of all the health hazards that we hear so much about, only heart disease ranks higher.

But the number of people killed is only part of the highway safety problem. Nearly 100,000 people were injured in motor vehicle accidents in 1975. Often these are very serious injuries that result in great pain and suffering, heavy treatment and rehabilitation costs, loss of productivity, long-term disability and family disruptions. As well, there is the cost borne by society of property damage - to the vehicle and the physical environment of the roadside.

The Ministry of Transportation and Communications presented the Committee its estimate of the cost to society of motor vehicle accidents in Ontario. Using somewhat arbitrary and admittedly conservative figures of \$50,000 for each life lost, \$1,500 for each injury, and \$1,053 for property damage, the total cost of motor vehicle accidents was estimated to be about \$460,000,000 in 1975 (Exhibit 4).

The purpose of this Committee is to reduce the tragic and costly burden caused by motor vehicle accidents in this Province. To achieve its purpose the work was divided into two phases, each of about five months duration. In the first phase, now completed, a general over-

view of highway safety was gained through hearings with the public and special interest groups and visits to other jurisdictions. The second phase will focus on specific areas for improvement.

Because highway safety is such a public concern, first priority was given to seeking the views of the public. Twenty advertised public meetings were held in fifteen different centres around the Province, as shown in Exhibit 5. As well, the Committee advertised for, and received, submissions from individuals containing over 300 recommendations.

In addition to hearing from the general public, the Committee sought out the views of the police and various professional and private interest groups. The police appeared before the Committee on fourteen separate occasions to describe local conditions, explain enforcement practices and offer many constructive suggestions drawn from their daily experience with highway safety problems. The forty professional and private interest groups that appeared are listed in Exhibit 6. They range from industry associations such as the Ontario Trucking Association, Motor Vehicle Manufacturers' Association, the Driving School Association, the Motorcycle and Moped Industry Council and the Insurance Bureau of Canada, to professional researchers and experts from organizations such as McMaster University, University of Western Ontario, the Traffic Injury Research Foundation and the Addiction Research Foundation.

The final part of phase one was a two-week trip to examine the highway safety systems of three foreign jurisdictions. The Committee visited Sweden and Great Britain - the two countries regarded as world leaders in road safety - and The Netherlands where extensive research has been done into the specific problems of the moped and the protective equipment required for its use. Exhibit 7 shows the trip schedule.

Chapter II sets out in more detail the findings and conclusions of the first phase. Generally, the Committee discovered that there is a clear mandate for legislative action. The people of Ontario - both the general public and the special interest groups - are supportive of government taking action to reduce the number and severity of motor vehicle accidents. The European experience is that, if the actions are carefully planned and coordinated, the highways can be made safer.

In phase two, over the next five months, the Committee's task will be to decide on the best set of actions for Ontario. This will be very difficult because there are literally hundreds of possibilities, and to date the Committee has found that there is little consensus among experts on any of them and that the effectiveness of any action tends to diminish over time. Therefore, it will be necessary not only to choose the most effective action for today, but also to ensure there is a capability for the continued development of new initiatives in the future.

Chapter III describes how the Committee intends to develop a comprehensive approach to highway safety for Ontario. This approach will balance short and long-term considerations, include specific measures as well as their required administrative back-up, and attempt to put together the most effective combination and sequence of actions. The Committee expects to have completed phase two by April 30 of next year.

The Committee is prepared at this time to make its first four recommendations. In Chapter IV, four specific measures are recommended for immediate implementation. They are: protecting moped riders by requiring the wearing of approved motorcycle helmets; informing the public about the seriousness of Ontario's drinking and driving laws by preparing an information handout for distribution to motorists renewing their vehicle licence plates; ensuring adequate screening of new drivers of commercial vehicles by implementing a classified driver's licence system; and, reducing car theft especially by "joy riding" juveniles by imposing a penalty on drivers who leave the key in the ignition of an unattended car.

For each of these recommendations, the Committee has unanimously agreed that there is enough information to justify immediate action, and that the action will be relatively inexpensive, easy to implement, could produce immediate results, and is not likely to conflict with the Committee's ultimate proposals.

There is in Ontario today a mandate for government action to make our highways safer. Ontario can be a world leader. The Committee has set for itself the very ambitious task of coming up with a comprehensive approach to realize that objective.

CHAPTER II

A MANDATE FOR ACTION

Highway safety is of concern to the public because virtually all Ontarians use and benefit from the highways, because the consequences of motor vehicle collisions can be devastating, and because actions to improve safety on the highways affect everybody.

As drivers or passengers, most Ontarians use the highways. Over half the population is licensed to drive. Everyone benefits from the thousands of commercial vehicles that use our highways to bring goods to market, to move materials between plants, and to carry people between cities and towns.

With so much travel - Ontario vehicles are estimated to travel some 40 billion miles per year - accidents occur. The Committee's concern is the number and severity of the accidents. In Ontario, in a normal year, about 10% of all registered motor vehicles will be involved in an accident. About one family in twenty will have one of its members injured in a motor vehicle accident, and about one family in a thousand will have one of its members killed.

Action to improve highway safety can minimize cost and suffering - reducing both the number and the severity of accidents. But there are costs to most highway safety measures. The costs are: financial, from adding more safety features to roads and vehicles or increasing the number of police; inconvenience, from such things as added travel time resulting from the lower speed limits; and limitations to personal freedom from such things as laws requiring the wearing of seat-belts or motorcycle helmets.

Because highway safety is such a public concern, the Select Committee, from its inception, gave the highest priority to seeking out the views of the people of Ontario, as well as hearing from professional and special interest groups and visiting three other jurisdictions. Over the last five months, the Committee has spent most of its time in hearings around the Province, giving

the people a chance to express their concerns. In twenty hearings held in fifteen different centres, as shown in Exhibit 5, the public impressed the Committee with its desire for legislative leadership. Another substantial part of the schedule was devoted to hearings with over forty professional and special interest groups. These groups, listed in Exhibit 6, recommended a wide range of action. Finally, two weeks were spent in three European countries - Sweden, The Netherlands and Great Britain - studying their road safety programs. In Europe, the Committee learned the importance of an organized, comprehensive approach. This chapter will summarize the main conclusions reached from meetings with each of these three sources.

Three central impressions emerged from this initial phase of the hearings. First, and perhaps most important, is the deep and universally expressed concern about the "carnage on the highways". The second is the "willingness to try" shared by the vast majority of people both here and in Europe. Although aware that there are no absolute solutions to the highway safety problem, almost everyone appearing before the Committee expressed a willingness to support initiatives that might make an improvement. And third, most people share an optimism about the possibilities and are prepared for innovation and government leadership.

PUBLIC DEMAND FOR LEADERSHIP

Both in submissions made by the public during the hearings and in written briefs received in response to several advertisements placed in newspapers throughout Ontario, the public outlined its deep concern with highway safety and its desire for action. This public response came from all parts of the Province. There were some very specific suggestions from people with apparent expertise in highway safety or related fields. But the bulk of the response was a large number of general suggestions from people whose experience with highway safety is at the real and familiar level of "road user". Here, the Committee noted a public concerned about highway safety, uncertain as to the best course of action, but prepared for legislative leadership.

Virtually every witness prefaced his or her remarks with the comment that "something must be done". One private citizen expressed the feelings of many in stating that "we must end the carnage on the battlefields of our highways, particularly tragic when we consider how unnecessary the carnage is . . .". In an editorial that appeared on September 30, 1976, the Toronto Star reflected the same public mood when it stated that " . . . it's time we stopped being casual about 1,500 (sic) traffic deaths a year", and echoed the public's demand for action when it compared traffic accidents to an epidemic and unhappily concluded ". . . there is little sign that Queen's Park is preparing major initiatives to combat the epidemic". The depth of the public's concern for highway safety and its hope for strong government initiative was one of the first findings of the Committee. Throughout the first phase of its investigation, this finding was constantly reinforced.

A second finding of the Committee was the general uncertainty of the public - individually and collectively - as to the best course of action. Individually, while many witnesses were prepared to suggest possible solutions to particular problems, it was generally conceded that while a particular solution may help, it would not dramatically affect the overall problem. Collectively, the public's uncertainty was reflected in the fact that of the over 300 separate suggestions offered, very few were widely supported. Almost everyone had a unique idea. The ideas ranged from very specific suggestions to broad concepts aimed at improving highway safety. They included everything from specific changes in the design of the motor vehicle and roads to changes in enforcement techniques and driver behaviour. Only three received general support:

§ Mandatory driver education in schools

§ Tougher drinking-driving laws

§ More enforcement of speeding laws, especially
against trucks and buses.

The Committee concluded that while the public is concerned about the magnitude of the highway safety problem, it is uncertain about the best course of action and is, therefore, looking for legislative leadership and action.

SPECIAL INTEREST GROUPS' CONCERN FOR A WIDE RANGE OF ACTIONS

As well as meeting with the public, the Committee heard from the police, private interest groups and professionals. Representatives of the police spoke on fourteen different occasions. The private interest groups included organizations such as the Motor Vehicles Manufacturers' Association, the Ontario Motor League (OML), the Driving School Association, the Ontario Trucking Association (OTA), and the Motorcycle and Moped Industry Council. The professional groups were from organizations like McMaster University, the University of Western Ontario, the Traffic Injury Research Foundation, the Ottawa Civic Hospital and the Addiction Research Foundation. The Committee learned from the special groups that action will have to be considered on a wide front.

The special interest groups identified specific problems in the areas of their particular expertise, and joined with the public in discussing a wide range of highway safety concerns. In general, the judgment of the special interest groups is that many areas require attention and offer distinct possibilities for improvement. The brief presented by the OML, for example, suggested that the areas of enforcement, alcohol and drug use, transportation of school children, licensing of driver training schools, commercial trucking, Sunday trucking, driver training, examination and licensing of motor vehicle inspection were all amenable to immediate new initiatives as part of the "... ways and means to reduce to a minimum the number and severity of motor vehicle-related accidents". This pattern was repeated by many of the briefs.

In many instances, the presentations offered particular solutions that demonstrated the interrelationships among highway safety issues. A decision to act in one area often forces a decision in another. For example, the Essex County Automobile Club joined many other groups and individuals in recommending that all new drivers, in any age category, should be required to complete an approved course in driver education prior to being granted a first licence. They then recommended that the courses should be available only from provincially licensed sources. This latter recommendation directly contradicts the stand of the Canadian Professional Driver Education Association Inc. who advocate that "driver education should be placed exclusively in the hands of the commercial driver education industry".

As with the public, the special interest groups are both willing and anxious for new initiatives and are expecting action from government. In addition, they pointed out that action should proceed on a wide front because many areas offer possibilities for improvement, and because action in one area will lead to the need for decision in another.

EUROPEAN APPRECIATION OF THE NEED FOR COMPREHENSIVENESS

After seeking out and hearing the concerns and suggestions of the public and special interest groups, the Committee put its early impressions in perspective, and began its search for an overall pattern of action to improve Ontario's highway safety record, by visiting three foreign jurisdictions - Sweden, The Netherlands and Great Britain. Sweden and Great Britain were chosen because, as the world leaders in road safety, their records are significantly better than that of Ontario:

§ Ontario's 1,800 traffic fatalities are 80% higher than Sweden's 1,000, even though Sweden has about the same population, nearly the same number of motor vehicles and a similar climate

§ Ontario has 65 fatalities for every 100,000 registered vehicles, while Britain with far more crowded and narrow roads has only 50 fatalities per 100,000 vehicles.

The third jurisdiction chosen for study was The Netherlands. The Netherlands is a very crowded country with a good deal of two-wheeled traffic and does not, therefore, have an outstanding record of highway safety. The Committee visited this country because it has recently begun a massive, conscious program to improve its highway safety record. In that respect, its position is somewhat similar to that of Ontario. While it had already enacted seat-belt legislation and reduced speed limits, it is still faced with a record that appears amenable to further improvement. As well, The Netherlands has completed extensive research into the specific problems of the moped (motor-assisted bicycle) and the protective equipment required for its use, and had arrived at a solution that this Committee had been urged strongly to recommend.

The Committee studied extensively the strategies and administrative arrangements for improving highway safety in each country. Their highway environments were viewed, their experts interviewed, and their solutions and results studied. In a very short space of time, the Committee acquired an in-depth appreciation of their approach.

Generally, the Committee found in each country that the government had accepted the responsibility to examine and act on all reasonable possibilities for improvement. Having accepted this challenge, three factors led each jurisdiction to realize the need for a comprehensive approach.

1. There is no single solution to highway safety.
There was not a single instance where it was suggested that any one action or combination of actions offer an absolute solution. As well, European experts, like their counterparts in North America, recognize that even actions that initially have a positive impact lose their effectiveness over time
2. Actions in one area lead to actions in another.
The jurisdictions visited have experienced the phenomenon of working through interrelated chains of action. For example, implementing a difficult licensing test with a high failure rate in Sweden and The Netherlands led to more new drivers taking driving courses, which in turn made it necessary for government to control the quality of driving schools. In Sweden they have gone even further and have instituted a one-year, full-time course as a prerequisite to becoming a driving instructor
3. Any action taken must build on a base of public support. Each jurisdiction has conceded that the public must accept a law before it is enforceable. Therefore, as their research identifies particular problems, it is necessary to inform the public of the danger, build a general acceptance of the action needed to overcome it, and then legislate, if necessary, to penalize the minority of deviants.

One concrete manifestation of the European acceptance of a comprehensive approach is the administrative arrangements that they all have. In each country, there is a central institute for performing and directing road safety research. Each has some mechanism for coordinating the various agencies whose actions have an impact on road safety. And each has assigned administrative responsibility to one group to ensure that measures are developed, implemented and evaluated.

* * * * *

From all three groups - the public, the special interest groups and the European experts - the message has been clear. The necessity for new initiatives is accepted and these initiatives can result in safer highways. But, random action without an overall, comprehensive plan is likely to be ineffective. There is a mandate for action. During the next several months, the Committee must choose the shape and direction the action should take.

CHAPTER III

A COMPREHENSIVE APPROACH TO HIGHWAY SAFETY

It is the responsibility of this Committee to choose the actions needed to improve highway safety in Ontario. The public and the special interest groups have demanded action. The European jurisdictions visited have achieved results by acting. And, the Committee is convinced that action will bring results - not by totally eliminating accidents, but by significantly reducing their number and severity. This chapter sets out how the choice will be made.

In its initial phase, many suggestions were received from the public and special interest groups. They encompass a wide range of possibilities and cover every aspect of highway safety - the driver, the vehicle, the highway, enforcement and others. No "magic solutions" emerged. Every suggestion demands study and raises important and difficult questions.

To deal with the tremendous number of possibilities, a step-by-step process will be followed. The first step will be to narrow the possibilities to those that have a reasonable probability of being effective. The second will be to combine these effective measures into a package where each supports the other. The third step will put the package into an appropriate time sequence and set out the order in which they should be implemented.

This process will result in a set of actions that are likely to be effective, are supportive of each other, and are ordered in the most appropriate time sequence. Although this will be an important contribution to highway safety, there is more that should be done. Ontario needs a comprehensive approach that includes both short-term actions and a long-term philosophy, both specific changes and the organizational support to ensure their ongoing effectiveness. Therefore, the Committee is looking for a comprehensive approach with two major components. The first is a combination of measures for immediate and near-term implementation and a philosophy to guide the development of new measures for the long term. The second component is the organizational support of a sound management framework necessary for the successful implementation of the recommended measures. This organizational support will include administration, coordination, and research and analysis capabilities.

The goal of this Committee is to introduce a policy that will reduce collisions and fatalities over the short and long term, making Ontario a world leader in highway safety. This chapter sets out how that policy will be determined. The first section will deal with the series of possibilities suggested by the public and special interest groups, put in perspective with the information gained in Europe. The next section will outline the step-by-step process to be followed in choosing the right action. The chapter will end with a more detailed explanation of the comprehensive approach.

THE WIDE RANGE OF POSSIBILITIES

The public, special interest groups and European experts have suggested a tremendous number of areas for study, falling into five categories: the driver; the vehicle; the road environment; enforcement; and others that do not fit neatly into any of these. In order to begin the process of establishing the most effective combination of measures, the full range of suggestions that emerged in the initial phases must be considered. In this section, the issues raised will be outlined, along with the areas the Committee will assess during the remainder of its investigation.

THE DRIVER

"Driver error" is listed as the major cause of accidents in up to 90% of the reported cases in Ontario. Because driver error is such a major component of the accident picture, the Committee will give the problem of the driver careful attention. The information will be divided into specific categories for study, including driver education, testing, licensing, improving driving skills and attitudes, and the impaired driver.

Driver Education

There is a great deal of public interest in driver education and many issues of concern. In Ontario, an applicant for a driving licence does not have to have any formal driver education prior to the driving test. Although none of the European jurisdictions visited make training mandatory, a larger percentage of the applicants for a licence do take driver courses. This is because they make it very

difficult to pass the driving test without formal training. In these countries, greater effort is made to regulate the driving school industry, through annual inspections, government licensing, and controlled curricula. Neither Sweden, The Netherlands nor Great Britain, however, emphasized the introduction of driver education in the public school system, while in Ontario most school boards offer driver training as an extra-curricular activity.

The probe of driver education will begin with an attempt to determine its potential contribution to highway safety. The value of compulsory driver education will be considered, as well as the importance of a regulated curriculum, standards for instructors, and the continuation of these programs at the high school level.

Testing

Testing could also be important in conjunction with a renewed effort in driver education. The Committee noted that both Sweden and The Netherlands have stringent testing procedures. The Dutch fail approximately 50% of their applicants, while the Swedes fail over 40%. The degree of difficulty of the test in Great Britain appears to approximate that of Ontario. Several people appearing before the Committee suggested that Ontario's test should be more comprehensive.

The Committee will consider whether testing can have an influence on the collision and fatality rate, and if so, how our methods may be revised. It will consider the value of changing the written section, and will reassess the practical driving test. Study will also be made of the potential benefits of altering the prerequisites by, for example, stipulating that learners' permits must be held for one year prior to taking the test.

Licensing

In Ontario, licences currently fall into two categories, with a special classification for school bus drivers. In Sweden, The Netherlands and Great Britain, the 5 Class "Vienna Convention" system is in use. All these countries have the driver's photo imprinted on the licence.

The Committee will first consider whether alternative licensing systems can improve highway safety. It has already studied the advantages of a classified licensing system and will make a specific recommendation in the next chapter. In addition, it will assess the merits of licences with identification photos and probationary licences for the aged, for the young, or for those with poor records.

Improving Driver Skills And Attitudes

Sweden is committed to at least one major publicity campaign per year aimed at improving driving skills and attitudes. To a lesser extent, publicity is used in Great Britain, The Netherlands, and in Ontario. Many jurisdictions rely heavily on this approach as the most efficient way of reaching a large number of drivers and improving their driving performance.

The Committee has been advised that poor driving skills and attitudes are a major cause of highway accidents. It has noted little coordinated effort to solve this problem. It will assess the potential benefit of coordinated programs that could include increased retesting, publicity, enforcement and new reward systems for good drivers.

Impaired Driver

This is an area of central concern in which many different suggestions were received. Our laws in this area are as stringent as in any jurisdiction visited. Although the penalties and definition of impairment differ in each country, the impaired driver is dealt with severely everywhere.

Despite the severity of the punishment, driving while impaired remains a serious problem. This is especially true in North America where alcohol is involved in accidents far more often than in Europe. The Committee is aware of the magnitude of this problem. It will consider the level of blood alcohol that should constitute impairment, the value of increased enforcement, penalties and rehabilitation efforts, and publicity aimed at reducing drinking and driving.

THE VEHICLE

Multidisciplinary accident investigation suggests that in its interaction with the driver, vehicle design and condition may be a major contributor to the accident rate. The Committee will, therefore, examine this area, differentiating between new and old vehicles, trucks, school buses and two-wheeled vehicles, identifying problems common to all, and particular to each category.

New Vehicles

The European jurisdictions have made a major commitment to research and development of automobile safety standards. Sweden, for example, has its own unique automobile standards and performs a type-test on one of each model manufactured in, or imported into, the country. Through the European Economic Community (EEC) all three countries are working towards uniform vehicle standards. Ontario does very little work in standard setting, even though our climate imposes unique safety requirements on vehicles.

The Committee will assess the need for separate vehicle standards. It will consider whether the Ontario environment demands special standards and whether our market can require them. It will consider the position Ontario should take in the controversial debate between proponents of mandatory seat-belt usage and those favouring passive restraint systems such as airbags. As well, it will investigate the merits of a new car inspection system.

Old Vehicles

There is no compulsory inspection of older vehicles here or in The Netherlands. Sweden and Great Britain, however, have a vehicle inspection system. In Sweden, an annual inspection is made at a station of a Crown corporation owned by government and industry that was created solely for this purpose. In Great Britain, all vehicles over three years old are inspected annually at private service stations. Both countries provide each vehicle passed with a safety sticker.

The Committee has been advised that defects in older vehicles may be a safety threat. It will consider the potential benefits of compulsory inspection for older vehicles and also examine the possibility of extending the use of the MTC vehicle inspection "lanes" currently in existence.

The Truck

Currently, there are many restrictions placed on trucks. For example, there are limitations on Sunday trucking, on the length of the truck (65 feet) and on the number of pup trailers allowed. But, except for dump trucks, there is no compulsory safety inspection. In Sweden and Great Britain, trucks are inspected annually at government centres. The Netherlands joins these countries in limiting the size, type and speed of trucks (e.g., the Swedes allow double-articulated, multi-vehicle combinations up to 90 feet in length, but restrict the maximum speed to 40 Kph).

Safety restrictions are placed on trucks because the accidents they may become involved in can be very serious and because trucks frighten other motorists. Trucks travelling at high speeds or carrying heavy loads can create major problems. The Committee will consider the value of new length and height restrictions, compulsory inspection, special speed limits and markings to identify unstable chemicals. It will also study the problems associated with the multi-vehicle combination.

School Buses

School buses must be inspected regularly in Ontario. As well, the government has established certain safety regulations that are more stringent than those in many other North American jurisdictions.

Although the record of school buses is good, public concern over each fatality is high. The Committee will, therefore, consider the possibilities of making the safety record even better. Generally, it will examine the appropriateness of establishing even more stringent safety standards as well as rules governing behaviour inside the bus.

Two-wheeled Vehicles

In Ontario, there are neither special safety standards for two-wheeled vehicles nor requirements for special licences to drive them. Motorcycle drivers are required to wear specified helmets, but there is, currently, no such requirement for mopeds. None of the European jurisdictions visited had particular safety standards for two-wheeled vehicles, but all required helmets for moped and motorcycle drivers and had a separate licence classification for drivers in this category. Both Sweden and The Netherlands had extensively developed "bicycle paths".

The increasing number of accidents and deaths involving two-wheeled vehicles made this an area of concern. The Committee has already considered the mandatory use of helmets for moped drivers, and a licence classification system for two-wheeled vehicles. It will study the separation of traffic flows as a way of removing these vehicles from dangerous situations.

THE HIGHWAY

Ontario has excellent highways. But, it is the interaction of the driver with the highway environment that is important. More vehicle miles are being driven each year, resulting in congestion on the highways and increasing problems. For these reasons, both the specific uses and the design and maintenance of highways will be examined.

Specific Uses

Although little has been done to separate traffic flows, the concept is being experimented with in other jurisdictions. For example, the Dutch are creating "living areas" designed for pedestrians where the motor vehicle is a "guest". The Swedes are closing streets to traffic and limiting access to main thoroughfares. Another concept receiving study is speed limits that vary according to road characteristics.

The Committee will examine the safety value of separating traffic flows and introducing different speed limits for particular stretches of road.

Design and Maintenance

The design and maintenance of highways here is good. As in European jurisdictions, Ontario is heavily involved in the identification of trouble spots needing design modification. Yet, it appears that the Europeans allocate significantly more funds both to locate trouble spots and to rectify problems.

The Committee was advised of the vast safety potential of the "trouble spot" method and will consider the impact of increased emphasis. As a result of recommendations it received during the first phase of its work, the benefits of specific changes in highway design will be studied, such as paving shoulders or using warning systems for weather conditions.

ENFORCEMENT

Many people suggested that enforcement is the best way of dealing with the highway safety problem because it discourages dangerous driving behaviour. The Committee was told that more stringent enforcement could result in significant improvements. With this end in mind, both the introduction of new laws and the enforcement of existing laws will be considered.

Introducing New Laws

Many new laws were suggested. For example, the Committee was urged to establish a driver review board, independent of government control, to remove poor drivers from the highway. Some dissatisfaction was expressed with uniform speed limits and the use of Citizen Band radios and "fuzz busters" to escape speed traps. It was suggested that the fine structure should more accurately reflect both the seriousness of the violation and the ability of the offender to pay. The Committee was told of the advantages of allowing police to ticket vehicles rather than drivers for moving violations. Along with reducing high-speed chases, this could encourage the use of special speed-detection cameras currently being used successfully in other jurisdictions. Properly used, these cameras make "fuzz busters" ineffective. The Committee will consider the potential of these suggestions as well as the many others received from the public.

Enforcing Existing Laws

Both the public and the police emphasized that there must be more enforcement. The Committee was advised that it is important to increase both the probability of offenders being caught and the public perception of the chance of being caught. It was suggested that in Ontario the risk and perception are both too low. Sweden puts a great deal of effort into enforcement. European experts generally agreed that by increasing both the real and perceived chance of being caught, Sweden has found one of the essential ingredients of a successful highway safety program.

For these reasons, the Committee will study all possibilities for increasing both enforcement and people's perception of the risk of being caught.

OTHER

Several measures do not fit into any particular category. For example, in Ontario, there is no centralized organization with either an administrative or research function for highway safety. The important role such an organizational arrangement can play in promoting highway safety was demonstrated in all three European jurisdictions.

The Committee will consider the advantages of this kind of organizational support. It will assess the potential of an administrative structure to ensure the implementation of its recommendations, to provide continuity, and to evaluate and modify ongoing activities. As well, it will appraise the possibility that such a structure may provide the mechanisms needed to coordinate the related activities of various private and government agencies as well as providing the capability for necessary research and analysis.

THE PROCESS FOR CHOOSING

There are many areas where action can be taken. The Committee's serious and difficult responsibility is to choose specific actions for implementation from among the possibilities. There are three tasks in making the choices. The first is to narrow the range of possibilities to those that have a reasonable probability of being effective. The second is to determine how these possibilities should be combined. The third is to determine the most appropriate sequence and time frame for introducing any recommended action.

Deciding on the Effective Measures

The Committee must first narrow the wide range of possibilities down to those that have a reasonable chance of being effective. Two kinds of evaluation are needed. First, the possible actions must be appraised to determine whether they will actually improve highway safety. Second, the potentially effective possibilities must be evaluated to determine whether there is a reasonable relationship between the cost of the measure and the benefit of the improvement.

There are several difficulties in making these evaluations. The first is that there is little consensus among the experts. For every possible action the Committee might take, there will be several learned and respected authorities that favour the idea and as many who oppose it. For example:

- § Most highway safety researchers claim that formal training of new drivers is of no benefit. On the other hand, insurance companies are so convinced of its usefulness, that they are willing to give major financial support - in the form of premium reductions - to encourage new drivers to take formal training
- § Many people have suggested that the rear lights of vehicles be changed so that different colours are shown when moving forward, braking and turning. This suggestion has been endorsed by some experts in human perception. However, there are others who claim that in the complex traffic environment three colours would be unnecessarily confusing, and would make the driving task more difficult
- § Simple logic suggests that many possibilities such as wider, straighter highways or lower speed limits should lead to safety improvements. However, some psychologists claim that the driver's attitude to risk is of overriding importance. Their argument is that unless the driver's attitude to risk-taking is changed, the reaction to an intuitively logical improvement, such as wider, straighter roads, will be an increase in average speed and little overall improvement in safety.

It is, therefore, clear that the Committee cannot expect to be guided by the absolute consensus of experts. Experts will disagree on the most appropriate actions. In the absence of an expert consensus, the Committee will exercise its best judgment, as representatives of the public, to choose the actions that it believes will improve the safety of our highways.

Deciding that a particular action is likely to produce an improvement in highway safety will not be enough. This first stage of decision-making also requires some judgment about whether the overall benefit justifies the cost. This will be a difficult judgment to make, because in highway safety benefits and costs are not quantifiable on a uniform basis.

§ Benefits, for example, may include quantifiable decreases in, dollar costs, property damage, health charges, days of work lost, and death benefits paid. They may also include decreases in the loss of human life, personal suffering caused by pain, injury or disfigurement and the ongoing tragedy of social and family disruptions that cannot be quantified on the same basis

§ Costs of a particular improvement can often be quantified in monetary terms. It is simple to calculate construction and design costs, the higher purchase price of a safer vehicle, or salary costs of added police. Not all actions, however, are susceptible to this type of analysis. It is not as simple to assess the cost of inconvenience to the public (for frequent retesting), loss of job prospects (for tougher commercial driver's licence test), or loss of tolerance and respect for the law (setting speed limits considerably below the level of public acceptability).

Even though costs and benefits cannot be exactly quantified, the Committee will have to consider, in its assessment of particular actions, whether the overall benefit is justified in relation to total costs. This will narrow the many possibilities down to those that are potentially most effective.

Choosing The Best Combination And Actions

Once the possibilities have been narrowed to those that are potentially most effective, the Committee's second task is to determine the optimal combination of actions.

There are several considerations in choosing the optimal combination. First, certain combinations of actions are reinforcing. For example, a recommendation for more formal driver education could lead to recommending an upgrading and control of the private driving schools and a tightening of the driving test. Action to get the poor driver off the road might include changes to the demerit system, combined with photos on licences and increased stop checks to discourage driving with a suspended licence.

Some combinations, however, might create problems. There may be limiting financial constraints. For example, recommendations to upgrade the road environment, by creating new traffic separation systems, paving shoulders and improving dangerous stretches of road, might be too costly for the Province to absorb at once. Similarly, recommendations to improve vehicle safety by adding new safety features, setting roadworthiness standards and requiring regular inspections, might put too heavy a financial burden on the motorist.

Setting The Recommendations In An Optimal Time Frame

To build constructive combinations of countermeasures without reaching the limits of resources or public tolerance means setting priorities. Ultimately, all the recommendations may be amenable to implementation. But the time frame in which implementation is set must be carefully considered. The final task is to choose the optimal time frame for the introduction of its recommended actions.

In each country in Europe, the Committee found a thoughtful approach to the introduction of highway safety measures. The sequence begins with the public being informed of the dangers of a particular situation, and a consensus for improvement being built, prior to the necessary legislation being enacted. This process reduces the possible backlash caused by legislating an unpopular law. Another lesson learned from the European experience is that an important element in the effectiveness of countermeasures is their ability to raise public consciousness about highway safety. For example, a well publicized crackdown on drinking and driving offences may lead to an overall improvement in driver performance. If too many actions are introduced at once, the psychological effect of some could be lost, the public might feel overloaded and "tune out" the whole range of actions.

Another limitation is that of manpower and administrative capability. For example, recommendations to change the system of licensing drivers, adding probationary periods, revamping the demerit system and including a photo on the licence, may overwhelm the managerial and administrative capacity of the Drivers and Vehicles Division of the Ministry of Transportation and Communications.

A more tangible limitation of feasible combinations is the tolerance of the public for accepting new regulations. The public may only be prepared to accept a limited amount of government

interference in their everyday lives. Too many new regulations and restrictions, enacted together, could lead to a backlash that takes the form of widespread refusal to comply with new or existing laws.

Another serious time frame problem is the well documented "fade effect". Countermeasures that are new and unique are effective in reducing accidents for varying periods of time. Then, the effectiveness fades and accident rates return to their former levels. The "fade effect" is not, however, a cause for inaction. During the improvement period many lives can be saved. As well, Sweden has shown how the continuous introduction of new countermeasures can stretch the fade period and maintain a high level of safety.

This Committee is facing up to the very serious and difficult responsibility of developing an integrated countermeasure policy for Ontario. This requires narrowing the wide range of possibilities to the most effective ones, choosing the most constructive combinations, and determining the most appropriate time frame for implementation. Motor vehicle accidents can never be completely eliminated, but an integrated countermeasure policy will assure the people of Ontario that the Legislature is doing all it can to keep the rate and severity of accidents as low as possible.

ELEMENTS OF THE COMPREHENSIVE APPROACH

The Committee is aware that it is facing a formidable task. The time it can devote to its task is finite and its resources are limited. It is aware that its responsibility as a legislative committee is to set out a policy framework and direction, and allow the Government to administer the policy. This section of the report sets out the kind of lasting impact being sought and briefly outlines the work plan for achieving the impact.

Working Out A Comprehensive Approach

The Committee has concluded that the Province of Ontario needs a comprehensive approach to highway safety. This approach will have two major components. The first will concentrate on the measures to be taken

in the short, medium and long term to counter the growing number of accidents. This integrated countermeasure policy will include:

- § Short-term action. The highest priority will be to make specific recommendations in areas where immediate action can and should be taken to reduce accidents and to lay the groundwork for future improvements
- § Medium-term proposals. Some of the measures studied by the Committee will not be amenable to immediate action either because further work is needed to determine the best approach, or because preliminary action is needed to lay the proper foundation. In these areas, recommendations for appropriate preliminary action will be made
- § Long-term philosophy. Improving highway safety is a long, difficult job. As long as we remain a motorized society, a continuous effort is needed to keep our roads as safe as possible. The Committee will attempt to set out a basic philosophy for highway safety action that will guide its development and implementation over the longer term.

In addition to recommending and guiding the actual measures to be taken, the Committee is also concerned that its short, medium and long-term recommendations be implemented successfully. Therefore, the second part of the comprehensive approach will cover the managerial requirements of a successful highway safety program. A sound management framework will have three important components. They are:

- § An administrative structure to ensure that immediate action is taken, to provide continuity through the appropriate sequence of steps necessary to introduce new measures, and to evaluate and modify ongoing activities
- § Coordinating mechanisms to bring together the related activities of a wide number of agencies and organizations within and outside government who contribute to the improvement of highway safety

§ A research and analysis capability to provide an objective evaluation of existing measures, a continuing identification of new and emerging highway safety problems, and thoroughly researched alternatives for tackling them.

Working To Put Together The Plan

In seeking to provide a comprehensive approach to highway safety, the Committee is setting a challenging objective for itself. It will be extremely difficult to achieve. But in an area that touches so many lives, in such tragic ways, achievement is necessary.

In order to fulfill its objectives, a very full winter schedule is being organized. Numerous experts from within and outside the Government, from Ontario and from other jurisdictions will be invited to make presentations on particular areas of concern. As many facets of highway safety as possible will be covered, at least at a general level. And, after hearing the evidence, recommendations will be forwarded to the Legislature.

To achieve its objectives, an extension of the time beyond the December 31 deadline set out in the terms of reference is necessary. The Committee, therefore, recommends that:

RECOMMENDATION I: THE DATE SET FOR THE PRESENTATION OF THE FINAL REPORT BE EXTENDED TO APRIL 30, 1977.

CHAPTER IV

RECOMMENDATIONS FOR IMMEDIATE ACTION

The Select Committee found a mandate for action. It has committed itself to a work program that will, by the spring of next year, result in a comprehensive set of proposals for making Ontario's highways safer. The set of proposals will include specific recommendations for immediate implementation. In this chapter, the Committee will make the first four of its recommendations.

Four criteria were used to choose these first recommendations. First, the Committee agreed unanimously that it had enough information to recommend action. Second, the Committee decided that the recommended actions will be relatively inexpensive to implement and easy to introduce. Third, it noted that immediate results could be realized. Finally, it determined that the recommended measures are not likely to conflict with its final comprehensive set of proposals.

The four actions that meet these criteria are: protecting moped drivers with adequate helmets; informing drivers of the serious consequences of a conviction for an impaired driving offence; supporting the early introduction of a classified driver's licence system; and imposing a penalty against leaving keys in the ignition of an unattended vehicle.

ADEQUATE PROTECTION FOR MOPED DRIVERS

When mopeds (motorized bicycles or pedal-assisted motorcycles) first appeared on Ontario roads, authorities were unsure of the most appropriate way to deal with them. When there were relatively few, they were treated as bicycles and therefore exempt from various safety laws and regulations that apply to motorcycles. As the number of mopeds grew (there are now over 8,800 mopeds licensed), accidents increased to a point where regulation became imperative. In 1975, the Government passed a bill that gave mopeds a unique status and required that they:

§ Be licensed

§ Have a top speed of 25 mph

§ Have only one forward gear

§ Be driven only by licensed drivers over 16 years of age

§ Be ridden only by one person at a time (no passengers).

At the urging of some members of the Legislature, an additional section of the bill requiring moped drivers to wear helmets was not proclaimed. At that time, several members believed that a motorcycle helmet was too heavy for moped drivers, and that the section should not be proclaimed until a suitable, lighter helmet standard could be developed.

The Select Committee was asked by the Legislature to determine the most appropriate type of helmet for moped drivers. Over the summer, evidence was heard from the public, the moped industry and the Ministry of Transportation and Communications (MTC).

§ The public and safety associations presented one clear message to the Committee: make the wearing of helmets for moped drivers compulsory. There was very little discussion about the specific type of helmet to be worn, except from one member of the public who had undertaken a personal study of moped helmets. He stated that there was no justification for delaying the proclamation of a bill requiring moped drivers to wear helmets since a light moped helmet standard had been tested and introduced in The Netherlands

§ The moped industry, through its association and private retailers, sent briefs and appeared before the Committee. The industry's position was that helmets were unnecessary because: mopeds have an excellent safety record; people object to wearing a helmet (for example, because it ruins their hair styles); and speed restrictions make mopeds like bicycles. In addition, the industry cautioned the Committee against discouraging the widespread use of such an economical and fuel-saving vehicle

§ MTC briefed the Committee on its efforts to find a suitable moped helmet standard for Ontario. They cautioned against recommending the adoption of a helmet standard that could not be tested by the Canadian Standards Association or that could not be made generally available at a reasonable price. Further, they suggested that the main opposition to helmet wearing had not come from moped re-tailers as much as it had from moped riders who did not want to wear helmets.

On the basis of the evidence presented, the Committee was persuaded that moped drivers should be wearing helmets as soon as possible. It was convinced that it was going to take a considerable amount of time for MTC to come up with a new helmet standard. The Committee was not satisfied to leave moped riders unprotected any longer. Therefore, it sent a letter to the Minister of Transportation and Communications urging him to require moped drivers to wear an approved motorcycle helmet as soon as the appropriate regulation could be proclaimed.

In Europe, the Committee followed up the question of moped helmets in each jurisdiction visited. It found good cause for reiterating its earlier stand. Further, it concluded that the search for a special moped helmet standard was unnecessary. The Committee found that:

- § In Sweden, moped drivers wear approved motorcycle helmets. Authorities there have never seriously considered adopting a lighter helmet standard for mopeds
- § In The Netherlands, moped riders wear a helmet that is lighter than a motorcycle helmet. The Dutch adopted a lighter moped helmet standard in 1974 in order to placate the more than two million moped riders in that country who objected to the wearing of any helmet
- § In Great Britain, moped drivers wear approved motorcycle helmets. After considering research data, British authorities rejected the use of a lighter helmet.

Investigations in Europe confirmed the earlier stand that moped riders should wear helmets. Further, clear evidence was provided that there is no justification for a lighter helmet. No more time or effort should be devoted to searching for a lighter helmet standard. The motorcycle helmet provides the minimum level of protection required. The Committee recommends that:

RECOMMENDATION II: THE ONTARIO GOVERNMENT, WITHOUT FURTHER DELAY, MAKE THE WEARING OF AN APPROVED MOTORCYCLE HELMET COMPULSORY FOR ALL MOPED RIDERS.

INFORMATION TO PUBLIC ON THE DWI OFFENCES

The most serious highway safety problem in Ontario results from the combination of drinking and driving. A recent study by the Traffic Injury Research Foundation showed that impaired drivers are 23 to 83 times more likely to die on the highways than unimpaired drivers. (The difference in the risk factor depends on the age of the driver.) And yet, drinking and driving continues. It remains a widely accepted practice in our society. In a 1974 roadside survey conducted by Statistics Canada, it was found that 26% of all drivers on the road between 10:00 p.m. and 3:00 a.m. on Wednesday, Thursday, Friday and Saturday had been drinking.

The public seems to be largely unaware that the penalties for impaired driving are very severe. The public is even less aware that recent amendments to the Criminal Code have made the law even more stringent. If the law is to be an effective deterrent in discouraging people from driving while impaired, the public must be fully aware of the serious consequences of a conviction. For this reason, the Committee is recommending that the Government immediately launch an information campaign to ensure public awareness of the penalties which may be imposed.

The public consistently urged that the impaired driving laws be made more severe and that enforcement be stepped up. In making these suggestions, they frequently referred to the more stringent laws in Europe. In response to this strong expression of public opinion, the Committee paid special attention to the impairment laws and enforcement practices in Europe. Each of the countries visited had systems that were somewhat different, but overall, none had laws that were significantly more stringent than Canada.

- § Sweden's laws are tougher in that charges can be laid for blood alcohol levels as low as 50 milligrams of alcohol per 100 millilitres of blood, with two-week jail sentences imposed for levels of 150 or more. But Canadian law imposes automatic and longer jail sentences for second and subsequent offenders at the 80 level; does not require an actual blood test for evidence; and allows the police to stop any car and require a Breathalyzer sample if warranted
- § The Netherlands' law, like Sweden's, allows charges to be laid for blood alcohol levels at 50 milligrams. But our law has far tougher penalties and gives the courts far less discretion in imposing them
- § Great Britain was the first jurisdiction to introduce impaired driving laws that were based on blood alcohol levels. Their law was subsequently copied in many jurisdictions (including Canada) because it made it substantially easier for the police to charge impaired drivers. By making drivers fear conviction, impaired driving and the subsequent accident toll were dramatically reduced. Over the years, various legal loopholes have been found in the British law so that today the conviction rate is very low. In Canada, there are virtually no loopholes. Almost every driver caught by the police with a blood alcohol concentration of more than 80 milligrams per 100 millilitres of blood is convicted.

Overall then, while the public is calling for more stringent penalties for the drinking driver, our laws provide for penalties as severe as those of any other jurisdiction. Recent amendments, of which the public seems unaware, have added a new enforcement tool and made the penalties for conviction even stiffer.

- § The police are permitted to use a roadside testing device to screen potential offenders
- § A loophole that allowed second offenders to avoid the mandatory jail sentence has been closed
- § The penalties have been increased. For example, the maximum fine for a first offence has been increased from \$500.00 to \$2,000.00. And, under normal circumstances, the maximum jail term has been increased from three months to six months.

Our penalties are stringent and our enforcement mechanisms are as simple and certain as in any jurisdiction. But the effectiveness of a law in preventing offences depends, in part, on the public awareness that a strict, enforceable law exists. It is a documented fact in Europe - and likely the same in Ontario - that a large proportion of the population fears the legal consequences of impaired driving far more than the risk of causing, or being unable to avoid, an accident. Ontario is wasting the full benefit of strict laws as a prevention tool by not ensuring that the public is adequately informed.

The impaired driving problem is the most vexing that the Committee must deal with. The prevalence of alcohol in the most serious accidents makes it imperative that something be done. But the widespread use of alcohol and the general public acceptance of the drinking driver (especially at the lower levels of impairment) make effective action difficult. A good deal of time and energy in the months ahead will be devoted to this problem. For now though, the Committee urges the Government to ensure that the public is aware how strict our impaired driving laws are. Specifically, it urges the Government to take advantage of the approaching vehicle licence renewal period to provide all motorists with written information outlining the laws relating to impaired driving. The Committee recommends that:

RECOMMENDATION III: THE GOVERNMENT OF ONTARIO TAKE RESPONSIBILITY FOR THE PREPARATION AND DISTRIBUTION OF A FREE DOCUMENT OUTLINING THE LAWS RELATING TO IMPAIRED DRIVING. SUCH A DOCUMENT SHOULD BE READY FOR DISTRIBUTION TO ALL MOTORISTS RENEWING VEHICLE LICENCE PLATES FOR 1977.

EARLY INTRODUCTION OF CLASSIFIED DRIVER'S LICENCES

In Ontario, there are, currently, three kinds of driver's licences: the regular licence for personal driving; the chauffeur's licence for commercial driving; the school bus licence for school bus driving.

Many of the professional driving groups (such as the Ontario Trucking Association) pointed out that provincial requirements for commercial drivers are not very effective. These drivers must obtain a chauffeur's licence, but an applicant can obtain a chauffeur's licence

by passing a driving test in a family car. That licence then is a valid permit for the operation of all kinds of commercial vehicles from taxis to the largest truck and trailer combinations on the road. A driving test in the family car is clearly an inadequate indicator of a driver's ability to handle safely a large truck or bus. In fact, most commercial fleets recognize this inadequacy and hire only drivers who are experienced or properly trained.

Each of the countries visited (and most other European jurisdictions) has more specific regulations. A system of classified driver's licences is used that, for years, has been internationally accepted and implemented. In Sweden, for example, a driver is tested and licensed under one or more of five categories:

Category A	Motorcycles
Category B	Passenger cars, light trucks, taxis (with special permit)
Category C	Heavy trucks
Category D	Buses
Category E	Heavy trucks with one or more trailers.

These categories can be found in many European jurisdictions and have proved to be useful and workable.

MTC supports a classified driver's licence system and has been considering the implementation of such a system along the lines shown in Exhibit 8.

Professional drivers have pointed out the ineffectiveness of current provincial licensing of commercial drivers. There is a classified driver's licence system that internationally has been proven useful and workable over many years. MTC is ready to implement a new scheme similar to the proven international system. The Committee believes that a classified driver's licence system would be a positive safety measure, and at the time of writing, it has just been informed that it is to be implemented. The Committee supports its implementation in recommending that:

RECOMMENDATION IV: THE MINISTRY OF
TRANSPORTATION AND COMMUNICATIONS
BEGIN THE IMPLEMENTATION OF A SYSTEM
OF CLASSIFIED DRIVER'S LICENCES IN THE
NEXT CALENDAR YEAR.

PENALTY IMPOSED FOR LEAVING KEYS IN IGNITION

The Committee's fourth specific recommendation is being made because it has concluded that immediate action can be taken to reduce car theft. A 1974 survey by Statistics Canada found that where the reason for theft is known, 85% of cars are stolen for the purpose of "joy riding" - usually by juveniles. "Joy riding" often leads to dangerous driving, to high-speed chases and to a juvenile's first criminal charges. Preventing car theft is, therefore, both a highway safety measure designed to minimize destruction, injury and death, and a crime prevention measure aimed at keeping young people out of the courts. Action in this area would be aimed at a growing problem. In 1963, there were 53 car thefts per 100,000 registrations in Canada. By 1974, the car theft rate climbed to 68 per 100,000 registrations.

One simple way of reducing car theft would be to stop people from leaving the keys in the ignition lock of unattended vehicles. The Statistics Canada survey could not determine how 53% of the vehicles were stolen but it did find that 30% were stolen with the keys in the ignition, as compared to 2% by hot wiring, and 5% by attacking the column lock.

Police in many centres drew attention to their inability to do anything when they saw an unlocked, unattended parked car with the keys left in the ignition. They suggested that the imposition of a penalty for leaving keys in the ignition would reduce "joy riding" and would also reduce the number of high-speed chases and the corresponding property damage and loss of life. Other people shared this view.

The United States Uniform Vehicle Code has a section (11-1101) stating that:

. . . No person driving or in charge of a motor vehicle shall permit it to stand unattended without first stopping the engine, locking the ignition, removing the key . . .

Twenty-three states of the United States have these provisions in their statutes. Some municipalities in Ontario have a by-law against leaving keys in the ignition of an unattended vehicle. Toronto has a by-law against leaving an unattended car unlocked. The Committee's terms of reference specifically directed it to consider "the benefits of the application of a penalty against any person who leaves keys in the ignition lock of an unattended vehicle". Accordingly, the Committee recommends that:

RECOMMENDATION V: THE GOVERNMENT OF ONTARIO DRAFT FOR EARLY PRESENTATION TO THE LEGISLATURE APPROPRIATE LEGISLATION TO IMPOSE A PENALTY AGAINST ANY PERSON WHO LEAVES KEYS IN THE IGNITION LOCK OF AN UNATTENDED MOTOR VEHICLE.

CONCLUSION

At the end of five months, the Select Committee has concluded the first phase of its investigations: it has heard a representative sampling of public concern; it has drawn on the expertise of special interest groups; and, it has put both of these into perspective by visiting European jurisdictions. The Committee is now familiar with the web of interrelated issues that constitute the highway safety "problem". A belief has grown with increasing force that there is a clear need for action. The Committee is ready to respond to this need, and is determined to act.

As emphasized throughout this report, it is not enough to effect short-term solutions to a problem that will be of ongoing concern. The goal is to improve safety on the highways immediately and over the long term. There are four areas in which immediate action can and should be taken, and recommendations have been made in these areas. But, there is a great deal more that must be done to make Ontario a world leader in highway safety.

In its final report, the Committee will set out a comprehensive approach for improving highway safety in Ontario. The comprehensive approach will include an integrated countermeasure policy and supporting management framework. The integrated countermeasure policy will encompass recommendations for immediate implementation, additional possibilities requiring further study and an overall philosophy for the continuing development of countermeasures over the longer term. The supporting management framework will consider the need for an administrative structure to manage the immediate implementation and longer term development of countermeasures, coordinating mechanisms to ensure that the various agencies having an impact on highway safety are working effectively together, and a research and analysis capability available to the Province to provide the necessary information and objective analysis for the continuing evaluation of existing countermeasures and the development of new ones.

It is only through such a comprehensive approach that significant results having a lasting impact can be achieved. The Committee will make its recommendations to the Legislature by April 30, 1977, firm in the belief that its report will benefit the people of Ontario, both today and in the future.

TERMS OF REFERENCE

Ordered, That a Select Committee of the House be appointed to study the overall question of highway safety in all its phases, including the problems associated with drinking and driving, the methods of accident prevention now in general use, driver education in the school system and public education, and to examine and consider any proposals designed to reduce the number of highway accidents submitted to the Committee and to report on methods to achieve greater safety on the highway, and more particularly, such matters as:

- The regulation and control of traffic through enforcement
- Stricter enforcement of the laws that pertain to drinking-driving offences for all ages
- Driver examination and licensing standards
- Driver improvement and rehabilitation, including demerit points system and traffic clinics (North York Traffic Tribunal)
- An assessment of potential benefits of photos on non-counterfeitable driver's licences and methods of implementation and administration
- An assessment of benefits of a vehicle registration and title system
- An assessment of benefits of Ontario's motor vehicle inspection programs.
- The transportation of children to and from school and the vehicles and their drivers
- The licensing of driving schools

- Equipment standards for tow trucks
- Operation of multiple vehicle combinations (pup trailers)
- The benefits of the application of a penalty against any person who leaves keys in the ignition lock of an unattended motor vehicle
- The most appropriate type of helmet for moped riders
- And such other matters as may be referred to the Committee by the Minister of Transportation and Communications.

And to submit an interim report to the Assembly not later than September 30, 1976, and a final report not later than December 31, 1976.

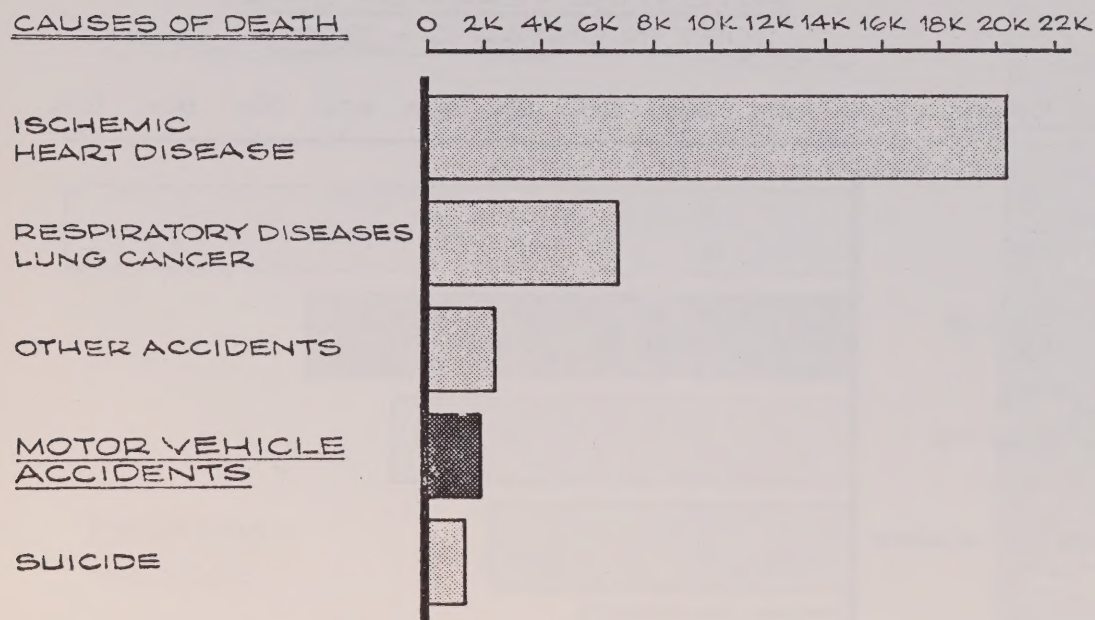
And that the Select Committee have authority to sit during recesses and the interval between Sessions and have full power and authority to employ counsel and such other personnel as may be deemed advisable and to hold meetings and hearings in such places as the Committee may deem advisable and to call for persons, papers and things and to examine witnesses under oath, and the Assembly doth command and compel attendance before the said Select Committee of such persons and the production of such papers and things as the Committee may deem necessary for any of its proceedings and deliberations, for which the Honourable the Speaker may issue his warrant or warrants.

And that the said Committee be composed of thirteen Members, as follows:

Mr. Young (Chairman), Messrs. Bounsall, Breaugh, Ferrier, Givens, Johnson (Wellington-Dufferin-Peel), Kennedy, Maeck, McCague, Mackenzie, Nixon, Norton and Riddell.

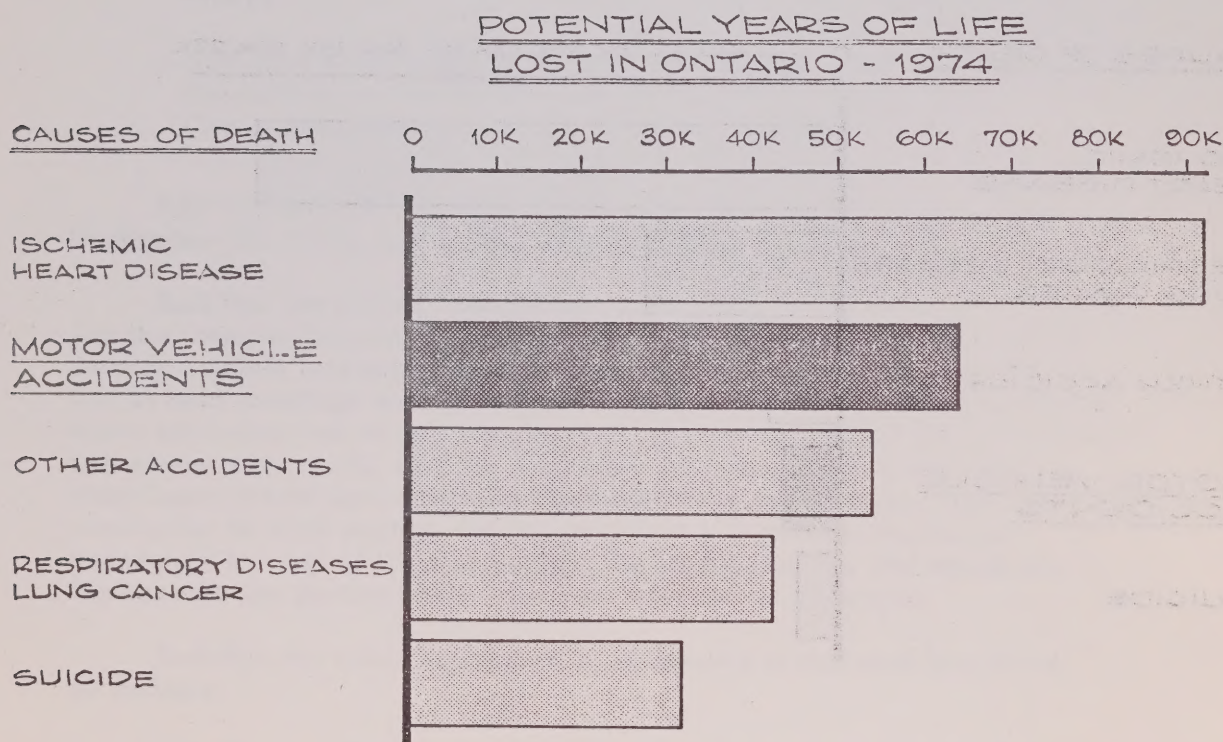
MOTOR VEHICLE ACCIDENTS ARE THE FOURTH
LEADING CAUSE OF DEATH IN ONTARIO

5 MAJOR CAUSES OF DEATH IN ONTARIO - 1974



SOURCE - MINISTRY OF TRANSPORTATION & COMMUNICATIONS

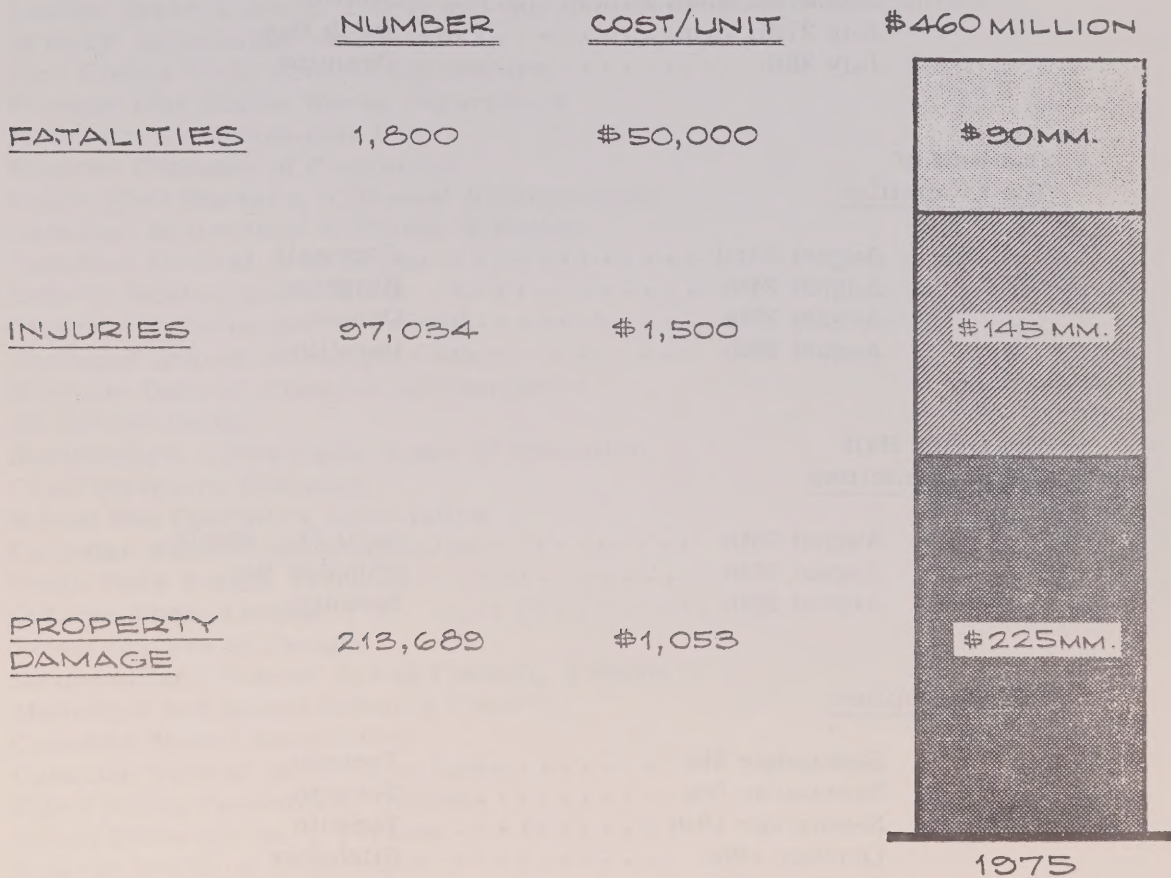
BUT MOTOR VEHICLE ACCIDENTS ARE SECOND IN
LOSS OF POTENTIAL YEARS OF LIFE



SOURCE - MINISTRY OF TRANSPORTATION & COMMUNICATIONS

MOTOR VEHICLE ACCIDENTS COST THE PEOPLE OF ONTARIO
NEARLY HALF A BILLION DOLLARS IN 1975

COST OF MOTOR VEHICLE ACCIDENTS, ONTARIO - 1975



SOURCE - MINISTRY OF TRANSPORTATION & COMMUNICATIONS

ADVERTISED PUBLIC HEARINGSFull Committee

July 20th	Barrie
July 21st	London
July 22nd	Windsor
July 26th	Ottawa
July 27th, a.m.	Ottawa
July 27th, p.m.	North Bay
July 28th	Timmins

One Half of
The Committee

August 23rd	Cornwall
August 24th	Kingston
August 25th	Oshawa
August 26th	Hamilton

The Other Half
Of the Committee

August 24th	Sault Ste. Marie
August 25th	Thunder Bay
August 26th	Sudbury

Full Committee

September 8th	Toronto
September 9th	Toronto
September 10th	Toronto
October 19th	Kitchener
October 20th	St. Catherines

Professional and Special Interest Groups

Who Made Presentations

Before the Committee

Police Departments - different cities and municipalities
Ontario Provincial Police - various divisions
London Health Council, Safety and Accident Prevention Subcommittee
Drivers' Association of Ontario
Kent County Federation of Agriculture
Windsor City Public Works Department
Essex County Automobile Club
Windsor Chamber of Commerce
United Auto Workers, Citizens' Subcommittee
Canadian Association of Chiefs of Police
Canadian Medical Association
Ontario Medical Association
Ottawa - Carleton Safety Council
Thousand Islands Motorcycle Club
Kingston District Chamber of Commerce
401 Action Group
Northumbria - Newcastle Board of Education
CIAG Insurance Company
School Bus Operators Association
Canadian Automobile Association
North York Traffic Tribunal
Ontario Motor League
Young Drivers of Canada
Metropolitan Citizens' Safety Council, Toronto
Motorcycle and Moped Industry Council
Canadian Moped Association
Canadian Vintage Motorcycle Group
City Cycling Committee, Toronto
Urban Bikeways Inc., Toronto
Ontario Trucking Association
Teamsters, Joint Council No. 52
Ontario Petroleum Association
Traffic Injury Research Foundation of Canada
Ontario Safety League
St. John's Ambulance
Insurance Bureau of Canada

Professional and Special Interest Groups

(continued)

Ontario Insurance Agents and Brokers' Association
Motorvehicle Manufacturers' Association
Allstate Insurance Company of Canada
Thunder Bay Chamber of Commerce
Lakehead Board of Education
St. Louis Driving School Association of Ontario
Ontario Safety Council
Kitchener and Waterloo Labour Council
Addiction Research Foundation, Hamilton

European Itinerary

September 27th - Arrival, Stockholm

September 28th - Swedish Road Safety Office, Solna

9:45	The Driver
10:30	The Road and Traffic Information
11:30	Law Enforcement
2:00	The Vehicle
4:30	

September 29th - Travel to Linköping, Swedish Road and Traffic Research Institute

en route	Demonstration of police stop check system
1:00	General Information about the Institute
1:15	Presentation of some research projects, factors and statistics
1:30	Presentation of some research projects concerning traffic behaviour, control and education
3:00	Visit to the laboratories - crash demonstrations, work in progress

September 30th - Swedish Vehicle Inspection Company

Detailed demonstration of system
Question period

October 1st - Experts from Volvo

Discussion of safety plan at Volvo
Research projects - present and future
Question period
Director of the Royal Automobile Club of Sweden - "opposition" viewpoint
Question period

October 2nd - Arrival in Amsterdam; travel to the Hague

October 3rd - (Sunday) - free day

October 4th - Visit to SWOV - Institute for Scientific Research of Traffic Safety in Voorburg (SWOV)

10:30 Review of SWOV by Director
 11:00 Driver behaviour and education
 11:25 Introduction to film on experiments with tires and road surfaces
 2:00 Design and classification of roads from viewpoint of driving task analysis
 2:25 Seatbelts
 2:45 Introduction to film about collisions with stationary and moving obstacles
 3:05 Strategies in pedestrian road safety research
 3:40 Film, submerging vehicles
 4:05 Conclusion

October 5th - Visit to TNO, Research Institute for Road Vehicles

10:00 Cross-wind sensitivity of automobiles and possible influence of power-steering
 10:30 Perception research in connection with traffic safety
 11:00 Tour of testing laboratories, including work being done with helmets, seat belts, fuel emission
 p.m. Return to the Hague

October 6th - Visit to Directorate of Road Safety, Dutch Ministry of Transport - discussion of their newly devised system for traffic policy

1:00 Meeting with Mr. Pol de Beer, opposition transport critic, Dutch Parliament
 p.m. Arrival in London

October 7th - Meetings with English experts in highway safety, not working for government-run centralized road research institute

10:00 Dr. Donald Taylor, University of Southampton, Driver Behaviour
 11:00 Dr. Ivan Brown, Medical Research Council, Psychology Laboratory, University of Cambridge, Research on Human Performance, Drinking-Driving
 2:00 Alistair Risk, University of Salford, Evaluation of Driver Education

3:00 James Laidlaw, University of Nottingham,
The Driver and the Driving Environment

October 8

- Visit to Traffic Research Laboratory, Crawthorne

10:30 Dr. Barbara Sabey, Director, Accident
Investigation Division - Urban Safety;
Drinking-Driving

11:30 Dr. Kemp - Heavy Vehicles Safety

12:00 Dr. Older - Driver Behaviour

2:30 Dr. Shepherd - Driver Education

- Return to London

ONTARIO CLASSIFIED DRIVER LICENSING SYSTEM

QUICK CHECK CHART

INTENDED AS A GUIDE ONLY
FOR OFFICIAL PURPOSES REFER TO THE ONTARIO HIGHWAY TRAFFIC ACT

MAY ALSO DRIVE MEDICAL GRADE VEHICLES IN CLASS

MINIMUM MEDICAL AND AGE REQUIREMENTS FOR CLASS OF LICENCE

CLASS OF LICENCE	TYPES OF VEHICLES ALLOWED	MINIMUM MEDICAL AND AGE REQUIREMENTS FOR CLASS OF LICENCE
A	ANY TRACTOR-TRAILER OR TRUCK-TRAILER COMBINATION	SAME AS GRADE 1, EXCEPT NO HEARING REQUIREMENT. VISION - ACUITY NO POORER THAN 20/30 IN BETTER EYE, AND NO LESS THAN 20/60 IN THE WEAKER EYE. HORIZONTAL VISUAL FIELD OF AT LEAST 120 DEGREES IN EACH EYE. - MINIMUM AGE 18
B	ANY SCHOOL BUS	HIGHEST MEDICAL REQUIREMENTS VISION - ACUITY NO POORER THAN 20/30 IN BETTER EYE, AND NO LESS THAN 20/60 IN THE WEAKER EYE. HORIZONTAL VISUAL FIELD OF AT LEAST 120 DEGREES IN EACH EYE. - MINIMUM AGE 21
C	ANY REGULAR BUS	- SAME AS FOR GRADE 1 ABOVE, EXCEPT MINIMUM AGE IS 18.
D	ANY TRUCK OR COMBINATION PROVIDED THE TOWED VEHICLE IS NOT OVER 10,000 LBS.	SAME AS GRADE 1, EXCEPT NO HEARING REQUIREMENT AND NO SUBSEQUENT OCCURRENCE OF AN OCCASIONAL FLASHER OF THUNDERBOLTS OR HEAVY ANGINA PECTORIS VISION - ACUITY NO POORER THAN 20/30 IN BETTER EYE, AND NO LESS THAN 20/60 IN THE WEAKER EYE. HORIZONTAL VISUAL FIELD OF AT LEAST 120 DEGREES IN EACH EYE. - MINIMUM AGE 18
E	SCHOOL BUS MAXIMUM OF 24 PASSENGER CAPACITY	HIGHEST MEDICAL REQUIREMENTS VISION - ACUITY NO POORER THAN 20/30 IN BETTER EYE, AND NO LESS THAN 20/60 IN THE WEAKER EYE. HORIZONTAL VISUAL FIELD OF AT LEAST 120 DEGREES IN EACH EYE. - MINIMUM AGE 21
F	REGULAR BUS MAXIMUM OF 24 PASSENGER CAPACITY AND AMBULANCES	- SAME AS FOR GRADE 1 ABOVE, EXCEPT MINIMUM AGE IS 18.
G	ANY AUTOMOBILE, SMALL TRUCK OR COMBINATION UP TO 18,000 LBS. PROVIDED THE TOWED VEHICLE IS NOT OVER 10,000 LBS.	MEDICAL REPORTS NOT REQUIRED EXCEPT WHEN MEDICAL CONDITION PRESENT. EACH CASE IS INDIVIDUALLY REVIEWED VISION - ACUITY NO POORER THAN 20/30 IN BETTER EYE, AND NO LESS THAN 20/60 IN THE WEAKER EYE. HORIZONTAL VISUAL FIELD OF AT LEAST 120 DEGREES. - MINIMUM AGE 16
M	MOTORCYCLES	- SAME AS FOR GRADE 5 ABOVE -
L	VALID FOR THE OPERATION OF A CLASS G MOTOR VEHICLE WHEN ACCOMPANIED BY A HOLDER OF A VALID CLASS 'A, B, C, D, E, F OR G' LICENCE, OCCUPYING A SEAT BESIDE THE 'L' LICENCE HOLDER, FOR THE PURPOSE OF GIVING INSTRUCTIONS IN DRIVING THE MOTOR VEHICLE.	- SAME AS FOR GRADE 5 ABOVE -
R	VALID FOR THE OPERATION OF A MOTORCYCLE UNDER THE FOLLOWING CONDITIONS: - VALID FOR DAYLIGHT OPERATION ONLY - NO PASSENGERS ALLOWED - NOT VALID FOR DRIVING ON CONTROLLED ACCESS HIGHWAYS	- SAME AS FOR GRADE 5 ABOVE -

THE PERMISSIBLE COMBINATIONS OF LICENCE CLASSES ARE:

- NOTE: - ANY CLASS OF LICENCE AUTHORIZES OPERATION OF A MOTOR ASSISTED BICYCLE
- CLASS L AND R LICENCES ARE ISSUED MANUALLY
- CLASS DESIGNATORS L AND R WILL NOT APPEAR ON COMPUTER PRODUCED LICENCES
- A PERSON MAY HOLD A SECOND DRIVER'S LICENCE WHERE THE SECOND LICENCE IS A CLASS R LICENCE ISSUED TO PERMIT THE LICENSEE TO OBTAIN EXPERIENCE IN THE DRIVING OF A MOTORCYCLE.

AM AB ABM AC ACM
BM CM DM DE DEM DF DFM

WITNESSES APPEARING BEFORETHE COMMITTEE

H.J. Aiken	- Executive Director, Transportation Regulation, Ministry of Transportation and Communications
C. Ainslie	- Manager, Ontario Motor League, Essex County Automobile Club
E.W. Amos	- Driver Educator, Toronto, Ontario
D.H. Andrew	- Member, Ontario Trucking Association, Vehicle Inspection Committee
S.F. Andrunyk	- General Manager, Ontario Safety League
R. Arndt	- Alma, Ontario
Sergeant H. Artinian	- Niagara Regional Police, Safety and Public Relations Department
Mayor Assef	- Thunder Bay, Ontario
Staff Sergeant Atcheson	- Thunder Bay Police Force
D.J. Aves	- Secretary, Committees, Motor Vehicle Manufacturers' Association
S. Baker	- Century Driving School, Original Professional Drivers Limited, Toronto, Ontario
J.A. Bancroft	- Chairman, Ottawa - Carleton Safety Council
Dr. C.J. Barnes	- Toronto, Ontario
J. Bates	- Director, Motorcycle and Moped Industry Council
B. Bedford	- Vice President, Drivers' Association of Ontario, St. Mary's, Ontario
J.M. Benson	- Chamber of Commerce, Windsor, Ontario
B. Best	- Toronto, Ontario
G. Bohaker	- Ontario Insurance Agents and Brokers Association, Chairman Safety Committee
L. Blanchette	- North Bay, Ontario
T. Book	- Jerseyville, Ontario

Constable F. Bourdan	- Cornwall City Police
J.P. Boyer	- Toronto, Ontario
F. Burr	- M.P.P., Windsor - Riverside
S. Calder	- Chairman, Ontario Trucking Association, Council of Safety Supervisors
H. Caley	- Legal Counsel, Teamsters
E. Carscadden	- Carscadden Bus Lines, Oshawa, Ontario
T. Cavanaugh	- Ottawa, Ontario
S. Cerisano	- North Bay, Ontario
L. Chamberlin	- Larry's Driving School
D. Chambers	- Chamber of Commerce
G.B. Chesney	- Assistant Director of Public Relations, General Motors of Canada Limited
Dr. A.J. Child	- Director of Marketing and Government Affairs, M & T Products of Canada, Canacology Division, Hamilton, Ontario
D. Chitty	- London, Ontario
N.A. Clark	- Assistant General Manager, Motor Vehicle Manufacturers' Association
R.F. Clifford	- Director Field Operations, Volvo Canada Ltd.
R. Clitheroe	- Supervisor of Transportation, Northumbria-Newcastle Board of Education
A.J. Cohoe	- President, Ontario Motor League, Eastern Division
S. Cole	- North York Traffic Tribunal, Commissioner of Traffic, North York
J.H. Cranford	- Insurance Bureau of Canada, Director of Communications
W. Crawford	- Chairman, Insurance Bureau of Canada, Public Relations Committee
Chief D.T. Crosbie	- Bellville, Ontario
Mr. Dee	- Driver Instructor, Excel Driving School, Kingston, Ontario

R. Desjardins	- Traffic Commissioner, City of Hamilton, Ontario
R. Devereux	- Assistant Commissioner, Traffic Division, Ontario Provincial Police
J. Doirn	- City Cycling Committee
B. Duncan	- Ontario Motor League, Barrie, Ontario
Chief K. Duncan	- Gloucester Police Department
Dr. K.M. Edwards	- London Health Council, Director Medical Services, St. Joseph's Hospital, Safety and Accident Prevention Sub - Committee
J.E. Elliot	- Director, Engineering, Quality and Vehicle Safety, Chrysler Canada Ltd.
F. Ellis	- Metropolitan Citizens' Safety Council, Toronto, Ontario
D.W. Farren	- Director, Systems Research Branch, Ministry of Transportation and Communications
H.E. Feasby	- Ontario Petroleum Association, Co-Chairman, Automotive Committee
G. Fournier	- President, Allstate Insurance Companies of Canada
A.W. Fuller	- Manager, Ontario Motor League, Eastern Division
E. Fuller	- Haldemand, Ontario
W. Gargaro	- Manager, Kingston District Chamber of Commerce
H.T. Garry	- Staff Superintendent, Management Division, Ontario Provincial Police
R. Gaskin	- Auto Supervisor, Ontario Motor League, Oshawa, Ontario
Dr. D. Geekie	- Director of Communications, Canadian Medical Association
Dr. W. Ghent	- Chairman, Canadian Medical Association, Committee on Emergency Medical Services
Colonel W. Gibson	- St. John's Ambulance
H.F. Gilbert	- Deputy Minister, Ministry of Transportation and Communications

Dr. C. Godfrey	- M.P.P., Durham West
H. Gordon	- Executive Director, School Bus Operators Association of Ontario
Sergeant J. Gordon	- Ontario Provincial Police, Glengary County
Inspector Gorham	- Ontario Provincial Police, London District Headquarters
A.L. Goutouski	- Milton, Ontario
R.G. Gower	- Director, Licensing and Control Division, Ministry of Transportation and Communications
W.A. Green	- Vehicle Safety Engineer, General Motors of Canada Limited
M. Haddon	- Ministry of Transportation and Communications
R.M. Haggarty	- President, Ontario Trucking Association
L. Hamilton	- London, Ontario
L.O. Hanna	- Kingston, Ontario
Sergeant H. Harmer	- Traffic Division, Waterloo City Police
L. Harris	- Licensed Auto Mechanic, Kingston, Ontario
N. Hart	- Senior Instructor, Motorcycle Training Program, Thousand Island Motorcycle Club, Kingston, Ontario
M.H. Hattin	- Fitness and Standards Engineer, Licensing and Control Division, Ministry of Transportation and Communications
R. Hector	- St. Louis Driving School Association of Ontario
J. Hemmings	- Executive Director, Canadian Moped Association
G. Hession	- Director, Traffic Section of Canada Safety Council
S.P. Hilton	- London, Ontario
Constable Hockins	- Ontario Provincial Police, Whitby Attachment
Constable J. Hodgson	- Niagara Regional Police, Safety and Public Relations Department
D.A. Home	- Executive Director, Oshawa General Hospital
W. Howard	- Howard's Driving School, Toronto, Ontario
R.H. Humphries	- Assistant Deputy Minister, Drivers and Vehicles, Ministry of Transportation and Communications

H. Jensen	- Hamilton, Ontario
A.F. Johnson	- Secretary, Canadian Vintage Motorcycle Group
F. Johnston	- Teamster Joint Council No. 52
Deputy Chief T. Keep	- Thunder Bay Police Force
A. Kirkkainen	- Traffic Manager of Lakehead Board of Education
Constable F. Klein	- Safety Officer of 500 City Police
W. Koehn	- Kitchener and Waterloo Labour Council
D. Konig	- Director, Ontario Trucking Association, Industry and Public Relations Council
R. Lafontaine	- Assistant Commissioner Works and Road Engineering, Windsor City Public Works Department
K.E. Langford	- Kingston, Ontario
J.A. Laudenbach	- Co-Chairman, Ontario Petroleum Association, Automotive Committee
H. Leuteritz	- Chamber of Commerce, Windsor, Ontario
V.L. Lobraico	- Chairman, Ontario Trucking Association
G. Logan	- Traffic Officer, Barrie Police Department
L.P. Lonero	- Research Officer, Systems Research and Development Branch, Ministry of Transportation and Communications
T. Nacu	- Chairman, Safety Committee, Canadian Moped Association
G. Newman	- Teamster Joint Council No. 52
Dr. MacKenzie	- Coroner, Simcoe County, Elmvale, Ontario
Dr. J. MacKenzie	- Chairman, Committee on Accidental Injuries and Member of Canadian Medical Association
G.L. Mackie	- Environmental Control and Vehicle Safety, Ford Motor Company of Canada Limited
Sergeant I. MacKinnon	- Ottawa City Police Department
B. MacMillan	- Executive Director, Motorcycle and Moped Industry Council

T.E. Mahony	- Administrator, Transportation Safety, Ministry of Transportation and Communications
J. Majury	- Inspector, No. 3 District Traffic, Metropolitan Toronto Police Department
J.T. Manley	- Chairman of the Board, Motorcycle and Moped Industry Council
J. Martens	- Automotive Engineering Director, Allstate Insurance Companies of Canada
Sergeant E. Mayne	- Durham Regional Police
J. McCoomb	- Legal Counsel, Ministry of Transportation and Communications
D.P. McCracken	- Safety and Accident Prevention Sub-Committee, London Health Council
E. McEvers	- 401 Action Group
C. McQuire	- Ontario Motor League
R. Miller	- Goulburn Township
B. Milne	- Safety Officer of Thunder Bay
E.W. Minnes	- Member, Automotive Committee, Ontario Petroleum Association
A.U. Oakie	- Canadian Automobile Association
C. Pacquette	- Ottawa, Ontario
G.S. Palmer	- Traffic Safety Manager, Ontario Safety League
J. Pelletier	- Clarence Creek
R.E. Penfold	- Manager of Engineering, International Harvester of Canada
S.F. Phillips	- President, Ontario Insurance Agents and Brokers Association
Staff Sergeant J.W. Pluck	- Windsor City Police
D. Pratt	- Kingston, Ontario

Corporal W. Prosser	- Ontario Provincial Police, Barrie District Headquarters
P. Proulx	- Administration Department, Kingston General Hospital
K.B. Raham	- Chief Product Engineer, American Motors (Canada) Limited
R.L. Robinson	- Fire Chief, Pittsburgh Township
A. Roy	- M.P.P., Ottawa East
G. Roy	- Ontario Safety Council
Chief G.L. Saltmarsh	- Hamilton Fire Department
D.W. Savoie	- Safety Officer, Ontario Motor League, Essex County Auto Club
E. Shea	- CIAG Insurance Co.
Dr. H.M. Simpson	- Research Director, Traffic Injury Research Foundation of Canada
R.E. Simser	- Toronto, Ontario
J.E. Sinclair	- London, Ontario
Traffic Sergeant D. Smith	- Ontario Provincial Police, No. 1 Division, Chatham, Ontario
Inspector Spicher	- Ontario Provincial Police, No. 14 District Headquarters
L. Steele	- Urban Bikeways Inc., Toronto, Ontario
M.I. Stern	- Addiction Research Foundation, Hamilton, Ontario
Dr. H.J. Sullivan	- Director, Emergency Services, Hamilton Civic Hospitals
P. Sullivan	- Ontario Motor League
D. Tate	- President, Driving School Association
C. Thwaites	- Whitby, Ontario
Inspector J. Ure	- Windsor City Police Department
D.T. Veldhuis	- Assistant Canadian Service Manager, Mack Trucks Canada Limited

N. Walker	- Director, Dominion Driver Training School
J. Walsh	- Chrysler Worker, Citizens' Committee
R. Walshaw	- Waterloo, Ontario
O.G. Way	- Arden, Ontario
W. Weaver	- Kent County Federation of Agriculture, Chatham, Ontario
D.T. Williams	- Director, Eastern Region, Young Drivers of Canada, St. Catharines, Ontario
S.C. Wilson	- Acting Director, Road Safety Branch, Transport Canada
K. Windross	- President, Canadian Moped Association

RECOMMENDATIONS

- I THE DATE SET FOR THE PRESENTATION OF THE FINAL REPORT BE EXTENDED TO APRIL 30, 1977
- II THE ONTARIO GOVERNMENT, WITHOUT FURTHER DELAY, MAKE THE WEARING OF AN APPROVED MOTORCYCLE HELMET COMPULSORY FOR ALL MOPED RIDERS
- III THE GOVERNMENT OF ONTARIO TAKE RESPONSIBILITY FOR THE PREPARATION AND DISTRIBUTION OF A FREE DOCUMENT OUTLINING THE LAWS RELATING TO IM-PAIRED DRIVING. SUCH A DOCUMENT SHOULD BE READY FOR DISTRIBUTION TO ALL MOTORISTS RENEWING VEHICLE LICENCE PLATES FOR 1977
- IV THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS BEGIN THE IMPLEMENT-ATION OF A SYSTEM OF CLASSIFIED DRIVER'S LICENCES IN THE NEXT CALENDAR YEAR
- V THE GOVERNMENT OF ONTARIO DRAFT FOR EARLY PRESENTATION TO THE LEGISLATURE APPROPRIATE LEGISLATION TO IMPOSE A PENALTY AGAINST ANY PERSON WHO LEAVES KEYS IN THE IGNITION LOCK OF AN UN-ATTENDED MOTOR VEHICLE

WITNESSES APPEARING BEFORE THE COMMITTEE

ONTARIO GOVERNMENT

Ministry of the Attorney General

A. Campbell
Senior Crown Counsel

R.M. McLeod
Senior Crown Counsel

Ministry of Colleges and Universities

T.P. Adams
Assistant Deputy Minister

J.B. Hay
Superintendent, Private
Vocational Schools

Ministry of Community and Social
Services

D. Pitt
Co-ordinator of Half-
way Houses, Rehabilitation

Ministry of Consumer and Commercial
Relations

R.A. Simpson
Executive Director
Business Practices Div.

L. Wood
Director of Insurance
Services, Financial
Institutions Division

Ministry of Correctional Services

Dr. P.W. Humphries
Senior Medical Consultant
Programme Consultation and
Development Division

H.L. Silverman
Executive Director
Programme Consultation and
Development Division

Ministry of Education

J. M. Metcalf
Education Officer,
Student Activities and
Special Projects Branch

J. R. Millette
Member, Community Schools
Section, Curriculum Services
Branch

Ministry of Health

Dr. A. E. Leblanc
Director, Strategic Planning
and Research

Dr. W. A. Reed
Consulting Services Branch

Dr. B. Suttie
Assistant Deputy
Minister, Community Health

J. W. F. Bain
Director, Communications
Branch

D. O. Brown
Field Contact and Training
Officer

C. L. Brubacher
Director, Ambulance
Service Branch

Ministry of the Solicitor General

D. M. Lucas
Director, Centre of Forensic
Sciences

A. A. Russell
Deputy Solicitor General

Ministry of Transportation and
Communications

H. J. Aiken
Executive Director
Transportation Regulations

Ministry of Transportation and
Communications (Cont'd)

A.E. Argue
Executive Director
Executive Section
Regional Operations
Division, Drivers and Vehicles

F. Cederberg
Director, Public and Safety
Information Office

A.P. Cunliffe
Program Manager
Human, Social and Economic
Research

D.W. Farren
Directory, Systems Research
Branch

H.F. Gilbert
Deputy Minister

J. Gleason
Manager, Traffic Operations

R.G. Gower
Director, Licensing and
Control Division

M.H. Hattin
Manager, Vehicle Standards
Office

D.J. Hieatt
Senior Research Officer
Human, Social and Economic
Research

R.H. Humphries
Assistant Deputy
Minister, Drivers and Vehicles

Ministry of Transportation and
Communications (Cont'd)

F. Jung
Program Manager,
Highway Wayside Equipment
Research

C.E. Laybourn
Administrator, Safety
Standards and Practices
Section, Transportation
Regulation Division

L.P. Lonero
Research Officer,
Systems Research and
Development Branch

T.E. Mahony
Administrator
Transportation Safety

C.J. McCombe
Legal Counsel

L.W. McPhee
Program Administrator
Vehicle Inspection Programs

H.D. Mosher
Executive Assistant

R.S. Pillar
Manager, Highway Design
Office

J.R. Pollock
Programme Administration
Office Administrator,
Regional Operations Division

M. Quinton
Project Officer
Programme Development

Ministry of Transportation and
Communications (Cont'd)

J. Ryell
Head, Materials and
Quality Assurance

M. Sinclair
Regional Maintenance
Engineer, Central Region

F. Snelgrove
Program Manager,
Commercial Vehicle
Operations & Safety

R. Valliere
Programme Administrator
Motor Vehicles Inspection
Programme

Members of Legislative Assembly

F. Burr, M.P.P.
Windsor - Riverside

A. Roy, M.P.P.
Ottawa East

FEDERAL GOVERNMENT

Department of Transport, Ottawa

Transport Canada

P. Cooper

R.R. Galpin
Chief, Vehicle Safety
Programmes

S.C. Wilson
Acting Director
Road Safety Branch

National Highway Traffic Safety
Administration
Department of Transportation
Washington, D. C.

Dr. A.L. Burgett
Office of Crashworthiness

G. Butler
Highway Safety Management
Specialist

C. Elder
Special Assistant for Planning

D. Fee
Community Support and
Public Education Officer

J.P. Grillo
Chief of State Programs Division

C.S. Livingston
Director
Office of Driver and Pedestrian
Programs

D. Mela
Chief, Mathematical Analysis
Division
National Centre for Statistics
and Analysis

Dr. J.L. Nichols
Chief, Driver Programs Branch

Dr. S. Sacks
Office of Crash Avoidance
Handling and Stability Division

General F.W. Vetter, Jr.
Associate Administrator
Traffic Safety Program

Dr. R. Voas
Chief of Demonstration Evaluation
Division

E. Weinstein
Rehabilitation Specialist

ENFORCEMENT

Barrie Police Department

G. Logan
Traffic Officer

Belleville Police Department

Chief D. T. Crosbie,
representing Canadian Association
of Chiefs of Police

Cornwall City Police

Constable F. Bourdon

Durham District Police

Sergeant E. Mayne

Gloucester Police Department

Chief K. Duncan

Metropolitan Toronto Police

Chief H. Adamson

Inspector J. Majury
No. 3 District Traffic

Niagara Regional Police

Sergeant H. Artinian
Safety and Public Relations
DepartmentConstable J. Hodgson
Safety and Public Relations
Department

North York Traffic Tribunal

W. Boyle
Director, Driver Improvement
Course

S. Cole

Ontario Provincial Police

W. J. G. Bolton
Chief Superintendent
Traffic DivisionR. Devereux
Assistant Commissioner
Traffic DivisionH. T. Garry
Staff Superintendent
Management Division

Enforcement (Cont'd)

Ontario Provincial Police

Sergeant R. Gordon
Lancaster Detachment

Inspector C.H. Gorham
No. 2 District, London

G.W. Hickingbottom
Inspector
Traffic Investigations Branch

Constable H.O. Hockins
Whitby Detachment

Corporal W. Prosser
No. 7 District, Barrie

D. Smith
Traffic Sergeant
No. 1 District, Chatham

Inspector M.R. Speicher
No. 14 District, Sault Ste. Marie

Ottawa City Police Department

Sergeant I. MacKinnon

Sault Ste. Marie Police Department

Constable F. Klein
Traffic Division

Thunder Bay Police Force

Staff Sergeant J. Atcheson

Deputy Chief T. Keep

B. Milne
Safety Officer

Timmins Police Department

Inspector D. Harris

Waterloo City Police

Sergeant H. Harmer
Head, Traffic Division

Enforcement (Cont'd)

Windsor City Police Department

J.W. Pluck
Staff SergeantD.W. Savoie
Safety Officer

Inspector J. Ure

COMPANIES AND ASSOCIATIONS

Addiction Research Foundation

Dr. P. Ennis
Committee on Drinking and
DrivingDr. E. Sellers
Head, Clinical Research
Unit, Committee on Drinking
and DrivingDr. R. Smart
Associate Research
Director, Committee on
Drinking and DrivingM.I. Stern
Programme Consultant
Committee on Drinking and
DrivingDr. P. Whiteside
Committee on Drinking

Allstate Insurance Co. of Canada

G. Fournier
PresidentJ. Martens
Automotive Engineering Director

American Motors (Canada) Limited

K.B. Raham
Chief Product Engineer

American Motors Corporation

F.A. Stewart
Vice President, Government Affairs

Companies and Associations (Cont'd)

University of Calgary	Dr. E. Mikulcik Associate Professor Mechanical Engineering
Canada Safety Council	H.G. Hession, Director Traffic Section R.A. McInenly Supervisor, Driver and Traffic Safety Education
Canadian Medical Association	Dr. D. Geekie, Director of Communications Dr. W. Ghent Chairman, Committee on Emergency Medical Services
Canadian Moped Association	J.H. Hemmings Executive Director T. Nacu Chairman Safety Committee K. Windross President
Canadian Vintage Motorcycle Group	A.F. Johnson Secretary
Carscadden Bus Lines	E. Carscadden
Century Driving School	S. Baker

Companies and Associations (Cont'd)

Chrysler Canada Ltd.

J.E. Elliot
Director, Engineering, Quality
and Vehicle Safety

T.M. Hamilton
Manager, Materials Engineering

W.M. McCall
Manager, Public Relations

S.M. McDowall
Manager, Product and Quality
Engineering

T.R. Willsie
Manager, Safety and Car Products
and Service Engineering

Chrysler Corporation

S.L. Baker
Manager, Automotive Safety

D.A. Forman
Director of Advance Engineering
and Technical Operation

G.E. Frig
Program Manager, Research Safety
Vehicle-Product Planning and
Development Office

E.H. Heins
Chief Engineer, Automotive Safety
and Security

C.M. Kennedy
Manager, Automotive Safety Relations,
Public Responsibility and Consumer
Affairs

S.L. Terry
Vice President, Public Responsibility
and Consumer Affairs

Companies and Associations (Cont'd)

CIAG Insurance Co.

E. Shea

Cranfield Institute of Technology

Dr. J. Ellis
Head, Department of
Automobile Engineering
Bedford, England

Dominion Driving School

N. Walker
Director

Drivers Association of Ontario

B. Bedford
Vice President

Driving School Association

D. Tate
President

Excel Driving School

F.G. Dee

B.M. Dee

Ford Motor Company of Canada,
LimitedC.R. Charlton
Programs Manager, Public AffairsG.L. MacKie
Environmental Control and Vehicle
Safety EngineerT.E. Swann
Associate Environmental Control
and Vehicle Safety Engineer

Ford Motor Company

J.C. Eckhold
Director, Automotive SafetyJ.A. Edwards
Executive EngineerE. Farber
Operational Factors, Research
EngineeringL.M. Forbes
Operational Factors, Research
Engineering

Companies and Associations (Cont'd)

Ford Motor Company

R.E. Kimball
Executive Engineer

D.W. Paul
Vehicle Regulatory Engineer

J. Versace
Manager, Safety Research

M. Webb
Advance Safety Planning

401 Action Group

B. McEvers

General Motors of Canada Limited

D.A. Brodie
General Service and Quality Manager

G.B. Chesney
Assistant Director, Public Relations

F.C. Fleck
Director, Engineering and Forward
Planning (Chairman, Engineering
Committee of Motor Vehicle
Manufacturers' Association)

M.J. Gauvin
Administrator, Industry-Government
Relations Department

W.A. Green
Vehicle Safety Engineer

C.L. Jenkins
Secretary and Treasurer

D.E. McLean
Staff Project Engineer, Experimental

A.R. MacNab
Staff Project Engineer

D.H. McPherson
President

Companies and Associations (Cont'd)

General Motors of Canada Limited
(Cont'd)

R.M. Quick
Staff Project Engineer

A.R. Scott
Director of Industry-Government
Relations

General Motors Corporation

G.S. Bahling
Environmental Activities, Automotive
Safety, General Motors Technical Center

E.E. Conners
Safety Laboratory, Proving Ground

J.J. Flaharty
Director, State -Local Government
Relations

T.O. Jones
Director, General Motors Proving
Grounds

A.M. Kelly
Director, Vehicle Test Engineering

L.C. Lundstrom
Executive Director, Environmental
Activities Staff

R.S. Magill
Vice President, Industry-Government
Relations

D.A. Martin
Manager, Auto Safety - Proving
Grounds

A. Rininger
Safety Research and Development
Laboratories

G.R. Smith
Environmental Activities Staff,
Technical Center

Companies and Associations (Cont'd)

Gulf Oil Canada Ltd.	W.J. Cooper Director Corporate Affairs, Ontario
	J.R. Hamilton Manager Motorist Market, Ontario
	J.S. Shave Retailing Adviser, Head Office Marketing
Hamilton Automobile Club	A.U. Oakie
Hamilton Civic Hospitals	Dr. H.J. Sullivan Director, Emergency Services
Hamilton Fire Department	L.G. Saltmarsh Fire Chief
Hamilton Traffic Department	R. Desjardins Traffic Commissioner
John R. Hayes and Co. Ltd.	J. Hayes
Howard's School of Safe Driving	W. Howard
Imperial Oil Limited	G.P. Norris Ontario Retail Operations Manager
	A.W. Tero Retail Operations Supervisor
Insurance Bureau of Canada	J.H. Cranford Director of Communications
	W.R. Crawford Chairman of Public Relations Committee
	D. Wagner Chairman Automobile Committee
Insurance Corporation of British Columbia	K.V. Godfrey Manager Traffic Safety Research

Companies and Associations (Cont'd)

International Harvester Company of
Canada Limited

R.E. Penfold
Manager, Engineering

Insurance Institute for Highway
Safety

Dr. L.S. Robertson
Senior Behavioural Scientist

Dr. W. Haddon, Jr.
President

Kent County Federation of
Agriculture

W. Weaver

Kingston Chamber of Commerce

W. Gargaro
Manager

Kingston General Hospital

P. Proulx
Administration Department

Kitchener and Waterloo Labour
Council

W. Koehn

Lakehead Board of Education

A. Kirkkainen
Traffic Manager

Larry's Driving School

L. Chamberlin

London Health Council

Dr. K.M. Edwards
Director of Medical Services
St. Joseph's Hospital
Safety and Accident Prevention

D. P. McCracken
Safety and Accident Prevention
Sub-Committee

MGA Research Corporation

Dr. P. Miller

M & T Products of Canada

A.J. Child
Director of Marketing
and Government Affairs

Mack Trucks Canada Limited

D. Ten Veldhuis
Assistant Canadian
Service Manager

Companies and Associations (Cont'd)

Metro Citizens' Safety Council

F.H. Ellis
Executive Director

University of Michigan

K. Joscelyn
Public Relations Division
Highway Safety Research InstituteDr. D. Pelz
Director
Centre of Research of Utilization
of Scientific Knowledge
Institute for Social ResearchMotor Vehicle Manufacturers'
AssociationD.J. Aves
Secretary-CommitteesN.A. Clark
Assistant General ManagerMotorcycle and Moped Industry
CouncilJ. Bates
DirectorB. MacMillan
Executive DirectorJ.T. Manley
Board ChairmanNational Public Services
Research InstituteDr. J. McKnight
President

National Science Foundation

Dr. L. Ross
Director
Program in Law and Social Sciences

National Tank Truckers Inc.

A. Fraser
PresidentNorthumbria-Newcastle Board of
EducationR. Clitheroe
Supervisor of Transportation

University of North Carolina

Dr. D.W. Reinfurt
Highway Safety Research CenterDr. P. Waller
Institute of Highway Safety

Companies and Associations (Cont'd)

North York Board of Education

R. Clee
 Saranac Parents' Association
 Committee on School Bus Safety

H. Koehler
 Trustee Committee on
 School Bus Safety

J. Treasure
 Chairperson
 Committee on School Bus Safety

Ontario and Toronto Automobile
Dealers Association

J. Bear
 Vice President

J. Bird
 Executive Director

R. Foser
 Member
 General Legislative Committee

J. Frame

D. Ranney

Ontario Federation of Home and
School Associations

J. Bates
 Legislative Action Chairman

A. Camire
 Resolutions Chairman

M. Lister
 President
 Ottawa Home and School Council

Ontario Insurance Agents and
Brokers Association

G. Bohaker
 Chairman of the Safety Committee

S.F. Phillips
 President

Companies and Associations (Cont'd)

Ontario Medical Association

Dr. J. MacKenzie
Chairman
Committee on Accidental Injuries

Ontario Motor League

C. Ainslie
Manager

A.J. Cohoe
President (Eastern Division)

B. Duncan
(Barrie)

A.W. Fuller
Manager (Eastern Division)

R. Gaskin
Auto Supervisor
(Oshawa)

C. McGuire
President

P. Sullivan
Provincial Secretary

Ontario Petroleum Association

H.E. Feasby
Co-Chairman
Automotive Committee

J.A. Laudénbach
Co-Chairman
Automotive Committee

E.W. Minnes
Member
Automotive Committee

Ontario Safety League

S. Andrunyk
General Manager

Companies and Associations (Cont'd)

Ontario Safety League
(Cont'd)C. O'Hearn
Course DirectorG.S. Palmer
Assistant General Manager
Manager, Traffic Safety

Ontario Trucking Association

D.H. Andrew
Member
Vehicle Inspection Procedure
CommitteeS. Calder
Chairman
Council of Safety SupervisorsM. Connelly
Chairman of the BoardJ.O. Goodman
Executive Vice-PresidentR.M. Haggerty
PresidentR. Haystead
Member
Safety CommitteeD. Konig
Director
Industry and Public Relations
CouncilV.L. Lobraico
Chairman
Committee re Select Committee
on Highway SafetyB. MacKay
Member
Freight Claims Bureau

Companies and Associations (Cont'd)

University of Oregon	Dr. N. Kaestner
Ottawa-Carleton Safety Council	J. A. Bancroft
Pittsburgh Township Fire Department	R. L. Robinson Fire Chief
Queen's University	Dr. G. J. S. Wilde
St. John Ambulance	W. E. Austin President Ontario Council
	W. Gibson Staff Member
	E. Hartley Volunteer
School Bus Operators Association of Ontario	H. Gordon
Teamsters Union Local 938	H. Caley Legal Counsel
	F. Johnston
	G. Newman Union Representative
Thousand Islands Motorcycle Club	N. Hart
Thunder Bay Chamber of Commerce	D. Chambers
Timmins Board of Education	D. Welin
Timmins Safety Council	R. Davis
University of Toronto	Dr. M. Chipman Department of Preventive Medicine
	Dr. C. Mortimer Associate Professor of Ophthalmology
Traffic Injury Research Foundation of Canada	Dr. H. Simpson

Companies and Associations (Cont'd)

Transportation Safety Research Institute	L. Blanchette
United Automobile Workers	J. Walsh
Urban Bikeways Inc.	L.W. Steele Managing Director
Volvo Canada Ltd.	R.F. Clifford Director Field Operations
Western Highway Institute	Dr. T. Sherard Chief Engineer
Windsor Chamber of Commerce	J.M. Benson H. Leuteritz
Windsor Public Works Department	R. Lafontaine Assistant Commissioner Works and Road Engineer
Young Drivers of Canada	D.T. Williams Eastern Regional Director

OTHERS

E.W. Amos	E.W. Duffield	E. Orchard
R. Arndt	E. Fuller	C. Pacquette
Mayor Assef	A.L. Goutouski	J. Pelletier
Dr. C.J. Baines	L. Hamilton	B. Schoffer
B. Best	L.O. Hanna	R. Simser
T. Book	L. Harris	J.E. Sinclair
J.P. Boyer	S.P. Hilton	A. Skoropad
T. Cavanaugh	H. Jensen	C. Thwaites
S. Cerisano	K.E. Langford	I. Torok
D. Chitty	Dr. A.D. Mackenzie	R. Walshaw
J. Doiron	R. Miller	O.G. Way

WITNESS APPEARANCE SCHEDULE

(1976)

June 28	H. J. Aiken	Executive Director Transportation Regulation, MTC
	H. F. Gilbert	Deputy Minister, MTC
	D. W. Farren	Director, Systems Research Branch MTC
	R. G. Gower	Director, Licensing and Control Div. MTC
	R. H. Humphries	Assistant Deputy Minister Drivers and Vehicles, MTC
June 29	S. C. Wilson	Acting Director, Road Safety Branch Transport Canada
	T. E. Mahony	Administrator, Transportation Safety MTC
June 30	R. Devereux	Assistant Commissioner, Traffic Div. Ontario Provincial Police
	H. T. Garry	Staff Superintendent, Management Div., Ontario Provincial Police
	J. Majury	Inspector, No. 3 District Traffic Metropolitan Toronto Police Department
July 12	H. J. Aiken	Executive Director Transportation Regulation, MTC
	D. W. Farren	Director, Systems Research Branch MTC
	M. H. Hattin	Fitness and Standards Engineer Licensing and Control Division, MTC
	R. H. Humphries	Assistant Deputy Minister Drivers and Vehicles, MTC
	L. P. Lonero	Research Officer Systems Research and Development Br. MTC

(1976)

July 20	Corporal W. Prosser	No. 7 District, Barrie Ontario Provincial Police
	B. Duncan	Ontario Motor League, Barrie
	G. Logan	Traffic Officer Barrie Police Department
	Dr. A.D. MacKenzie	Coroner, Simcoe County (Elmvale)
July 21	Inspector C. Gorham	No. 2 District, London Ontario Provincial Police
	Dr. K.M. Edwards	London Health Council - Director Medical Services, St. Joseph's Hospital, Safety & Accident Prevention
	S.P. Hilton	London
	D.P. McCracken	London - Safety & Accident Prevention Sub-committee, London Health Council
	B. Bedford	V.P., Drivers' Association of Ontario St. Mary's
	J.E. Sinclair	London
	W. Weaver	Kent County Federation of Agriculture Chatham
	L. Hamilton	London
	D. Chitty	London
July 22	Staff Sergeant J.W. Pluck	Windsor City Police
	Traffic Sergeant D. Smith	No. 1 Division, Chatham Ontario Provincial Police
	R. Lafontaine	Assistant Commissioner, Works and Road Engineering, Windsor City Public Works Department
	Inspector J. Ure	Windsor City Police Department

(1976)

July 22	C. Ainslie	Manager, Ontario Motor League Essex County Auto Club
	D.W. Savoie	Safety Officer
	J.M. Benson	Windsor - Chamber of Commerce
	H. Leuteritz	Windsor - Chamber of Commerce
	F. Burr	M.P.P., Windsor - Riverside
	J. Walsh	U.A.W. - Chrysler Worker Citizens' Committee
July 26	J. Pelletier	Clarence Creek - 400
	A. Roy	M.P.P., Ottawa East
	Chief K. Duncan	Gloucester Police Department
	Sergeant I. MacKinnon	Ottawa City Police Department
	N. Walker	Director, Dominion Driving School
	L. Chamberlin	Larry's Driving School
	C. Pacquette	Ottawa
	Chief D.T. Crosbie	Belleville - representing Canadian Association of Chiefs of Police
	Dr. Wm. Ghent	Chairman, Canadian Medical Association, Committee on Emergency Medical Services
	Dr. D. Geekie	Director of Communications Canadian Medical Association
	Dr. J. MacKenzie	Chairman, Committee on Accidental Injuries and member of Canadian Medical Association
July 27	D. Tate	President, Driving School Association
	J.A. Bancroft	Chairman, Ottawa-Carleton Safety Council

(1976)

July 27	T. Cavanaugh	Ottawa
	E. G. Hession	Director, Traffic Section of Canada Safety Council
	R. Miller	Goulbourn Township
	L. Blanchette	Transportation Safety Research Institute
	S. Cerisano	North Bay
August 23	Constable F. Bourdon	Cornwall City Police
	Sergeant R. Gordon	Lancaster Detachment Ontario Provincial Police
August 24	O. G. Way	Arden
	P. Proulx	Administration Department Kingston General Hospital
	N. Hart	Senior Instructor Motorcycle Training Program - Representing Thousand Islands Motorcycle Club
	L. Harris	Kingston
	A. J. Cohoe	President, Ontario Motor League Eastern Division
	A. W. Fuller	Manager, Ontario Motor League Eastern Division
	L. O. Hanna	Kingston
	K. E. Langford	Kingston
	W. Gargaro	Manager, Kingston Chamber of Commerce
	F. G. Dee	Driving Instructors
	B. M. Dee	Excel Driving School, Kingston
	R. L. Robinson	Fire Chief, Pittsburgh Township
	Mayor W. Assef	Thunder Bay
	Deputy Chief T. Keep	Thunder Bay Police Force

(1976)

August 24	Staff Sergeant J. Atcheson	Thunder Bay Police Force
	D. Chambers	Chamber of Commerce, Thunder Bay
	B. Milne	Safety Officer, Thunder Bay
	A. Kirkkainen	Traffic Manager of Lakehead Board of Education
	A. Skoropad	Thunder Bay
	J. Pelletier	Thunder Bay
August 25	Constable F. Klein	Safety Officer, Sault Ste. Marie
	Inspector M.R. Speicher	No. 14 District, Sault Ste. Marie Ontario Provincial Police
	G. Roy	Ontario Safety League
	Constable H.O. Hockins	Whitby Detachment Ontario Provincial Police
	Sergeant E. Mayne	Durham District Police
	E. McEvers	401 Action Group
	R. Gaskin	Ontario Motor League, Supervisor Oshawa
	R. Clitheroe	Supervisor of Transportation, Northumbria-Newcastle Board of Education
	E. Carscadden	Carscadden Bus Lines, Oshawa
	C. Thwaites	Whitby
August 26	Dr. H. J. Sullivan	Hamilton Civic Hospitals, Director Emergency Services

(1976)

August 26	A. J. Child	Director of Marketing & Government Affairs, M. & T Products of Canada
	E. Shea	CIAG Insurance Co.
	T. Book	Jerseyville
	H. Gordon	Executive Director School Bus Operators Association of Ontario
	A. U. Oakie	Hamilton Automobile Club
	R. Desjardins	Traffic Commissioner, City of Hamilton
	E. Fuller	Town of Haldemand
	L. Barley	Timmins Safety Council
	R. Davis	Timmins Safety Council
	Inspector D. Harris	Timmins Police Department
	B. Schoffer	Timmins
	I. Torok	Timmins
	D. Welin	Chairman, Timmins Board of Education
September 8	Dr. C. J. Baines	Toronto
	S. Cole	North York Traffic Tribunal
September 9	E. W. Amos	Mississauga
	S. Baker	Century Driving School
	B. Best	Weston
	E. W. Duffield	Toronto
	F. H. Ellis	Executive Director Citizens' Safety Council

(1976)

September 9	W. Howard	Howard's School of Safe Driving
	H. Jensen	Hamilton
	C. McGuire	President, Ontario Motor League
	P. Sullivan	Provincial Secretary Ontario Motor League
	D. T. Williams	Eastern Regional Director Young Drivers of Canada
September 10	J. Bates	Director Motorcycle and Moped Industry Council
	J. P. Boyer	Toronto
	J. Doiron	Toronto
	A. L. Goutouski	Milton
	J. H. Hemmings	Executive Director Canadian Moped Association
	A. F. Johnson	Secretary Canadian Vintage Motorcycle Group
	B. MacMillan	Executive Director Motorcycle and Moped Industry Council
	J. T. Manley	Board Chairman Motorcycle and Moped Industry Council
	H. D. Mosher	Executive Assistant, MTC
	T. Nacu	Chairman, Safety Committee Canadian Moped Association
	R. Simser	Peterborough
	L. W. Steele	Managing Director Urban Bikeway Inc.
	K. Windross	President Canadian Moped Association

(1976)

September 14	D.H. Andrew	Member, Vehicle Inspection Procedure Committee, Ontario Trucking Association
	S. Calder	Chairman, Council of Safety Supervisors Ontario Trucking Association
	R.M. Haggerty	President Ontario Trucking Association
	D. Konig	Industry and Public Relations Council Ontario Trucking Association
	V.L. Lobraico	Chairman Committee re Select Committee on Highway Safety, Ontario Trucking Association
	H. Caley	Legal Counsel Teamsters Joint Council No. 52 Teamsters Local 938
	F. Johnston	Union Representative Teamsters Joint Council No. 52 Teamsters Union Local 938
	G. Newman	Union Representative Teamsters Joint Council No. 52 Teamsters Union Local 938
	H.E. Feasby	Co-Chairman, Automotive Committee Ontario Petroleum Association
	J.A. Laudenschach	Co-Chairman, Automotive Committee Ontario Petroleum Association
	E.W. Minnes	Member, Automotive Committee Ontario Petroleum Association
September 15	Dr. H. Simpson	Traffic Injury Research Foundation of Canada
	L.G. Saltmarsh	Fire Chief, City of Hamilton
	S. Andrunyk	General Manager, Ontario Safety League

(1976)

September 15	R. Palmer	Assistant General Manager, Traffic Safety Department Ontario Safety League
	W.E. Austin	President, Ontario Council St. John Ambulance
	Wm. Gibson	Staff Member St. John Ambulance
	E. Hartley	Volunteer St. John Ambulance
September 16	R. Humphries	Assistant Deputy Minister, MTC
	H. Aiken	MTC
	M. Haddon	MTC
	C.J. McCombe	Legal Counsel, MTC
	J.H. Cranford	Director of Communications Insurance Bureau of Canada
	W.R. Crawford	Chairman of Public Relations Committee Insurance Bureau of Canada
	G. Bohaker	Chairman of the Safety Committee Ontario Insurance Agents and Brokers Association
	S.F. Phillips	President Ontario Insurance Agents and Brokers Association
	H. Gilbert	Deputy Minister, MTC
September 21	K.B. Raham	Chief Product Engineer American Motors (Canada) Ltd.
	G.B. Chesney	Assistant Director of Public Relations General Motors of Canada Limited
	R.E. Penfold	Manager of Engineering International Harvester of Canada

(1976)

September 21	D. Ten Veldhuis	Assistant Canadian Service Manager Mack Trucks Canada Limited
	R. F. Clifford	Director, Field Operations Volvo Canada Ltd.
	D. J. Aves	Secretary-Committees Motor Vehicle Manufacturers' Association
	N. A. Clark	Assistant General Manager Motor Vehicle Manufacturers' Association
	J. E. Elliot	Director, Engineering, Quality and Vehicle Safety, Chrysler Canada Ltd.
	W. A. Green	Vehicle Safety Engineer General Motors of Canada Limited
	G. L. MacKie	Environmental Control and Vehicle Safety, Ford Motor Co. of Canada Limited
	G. Fournier	President Allstate Insurance Co. of Canada
	J. Martens	Automotive Engineering Director Allstate Insurance Co. of Canada
October 19	W. Koehn	Kitchener and Waterloo Labour Council
	Sergeant H. Harmer	Head, Traffic Division Waterloo City Police
	R. Walshaw	Waterloo
	R. Arndt	Alma
October 20	Sergeant H. Artinian	Niagara Regional Police, Safety & Public Relations Department
	Constable J. Hodgson	Niagara Regional Police, Safety & Public Relations Department
	M. I. Stern	Addiction Research Foundation, Hamilton

(1976)

December 1	F. Cederberg	Director Public & Safety Information Office MTC
	H. F. Gilbert	Deputy Minister, MTC
	D. W. Farren	Director, Systems Research Branch MTC
	A. P. Cunliffe	Program Manager Human, Social & Economics Research MTC
	D. J. Hieatt	Senior Research Office Human, Social & Economics Research MTC
	F. Jung	Program Manager Highway Wayside Equipment Research MTC
	R. S. Pillar	Manager, Highway Design Office MTC
December 8	M. Sinclair	Regional Maintenance Engineer Central Region, MTC
	J. Ryell	Head, Materials and Quality Assurance MTC
	L. W. McPhee	Program Administrator Vehicle Inspection Programs, MTC
	M. Hattin	Manager, Vehicle Standards Office MTC
	F. Snelgrove	Program Manager, Commercial Vehicle Operations and Safety, MTC
	H. Aiken	Executive Director Transportation Regulation Division, MTC
	Dr. W. A. Reed	Consulting Services Branch Ministry of Health
	C. L. Brubacher	Director, Ambulance Services Branch Ministry of Health
	D. O. Brown	Field Contact and Training Officer O. A. S. I. S., Ministry of Health

(1977)

January 4	General F.W. Vetter, Jr.	Associate Administrator Traffic Safety Program National Highway Safety Traffic Administration
	Dr. R. Voas	Chief of Demonstration Evaluation Division, National Highway Safety Traffic Administration
	E. Weinstein	Rehabilitation Specialist, National Highway Safety Traffic Administration
	D. Fee	Community Support and Public Education Officer, National Highway Safety Traffic Administration
	J.P. Grillo	Chief of State Programs Division, National Highway Safety Traffic Administration
	G. Butler	Highway Safety Management Specialist, National Highway Safety Traffic Administration
	C. Elder	Special Assistant for Planning, National Highway Safety Traffic Administration
January 5	Dr. L.S. Robertson	Senior Behavioural Scientist Insurance Institute for Highway Safety
	Dr. W. Haddon, Jr.	President Insurance Institute for Highway Safety

(1977)

January 6	R.E. Kimball	Executive Engineer Ford Motor Company
	Dr. J. Versace	Manager- Safety Research Ford Motor Company
	L.M. Forbes	Research Engineer Ford Motor Company
	G. Farber	Research Engineer Ford Motor Company
	D.W. Paul	Vehicle Regulatory Engineer Ford Motor Company
	J.C. Eckhold	Director, Automotive Safety Ford Motor Company
	J. Edwards	Executive Engineer Ford Motor Company
	M. Webb	Advance Safety Planning Ford Motor Company
	S.L. Terry	Vice-President Public Responsibility and Consumer Affairs Chrysler Corporation
	E.H. Heins	Chief Engineer Auto Safety and Security Chrysler Corporation
	G.E. Frig	Program Manager, Research Safety Chrysler Corporation
	L.L. Baker	Manager, Automotive Safety Chrysler Corporation
	D.A. Forman	Director, Advance Engineering and Technical Operation Chrysler Corporation
	C.M. Kennedy	Manager, Automotive Safety Relations Public Responsibility and Consumer Affairs Chrysler Corporation

(1977)

January 6	A.M. Kelly	Director, Vehicle Test Engineering General Motors Corporation
	D.A. Martin	Manager, Auto Safety-Proving Grounds General Motors Corporation
	A. Rininger	Safety Research & Development Lab. General Motors Corporation
	G.R. Smith	Environment Activities Technical Center General Motors Corporation
	R.S. Magill	Vice-President, Industry-Government Relations, General Motors Corporation
	E.E. Conners	Safety Laboratory, Proving Grounds General Motors Corporation
	J.J. Flaharty	Director, State-Local Government Relations, General Motors Corporation
	T.O. Jones	Director, General Motors Proving Grounds, General Motors Corporation
	L.C. Lundstrom	Executive Director, Environmental Activities Staff, General Motors Corporation
	F.A. Stewart	Vice-President, Government Affairs American Motors Corporation
	K.B. Raham	Chief Product Engineer American Motors (Canada) Limited
	J.E. Elliot	Director, Engineering, Quality and Vehicle Safety Chrysler Canada Ltd.
	T.M. Hamilton	Manager, Materials Engineering Chrysler Canada Ltd.
	W.M. McCall	Manager, Public Relations Chrysler Canada Ltd.

(1977)

January 6	S.M. McDowall	Manager, Product and Quality Engineering Chrysler Canada Ltd.
	T.R. Willsie	Manager, Safety and Car Products and Service Engineering Chrysler Canada Ltd.
	C.R. Charlton	Programs Manager, Public Affairs Ford Motor Company of Canada Limited
	G.L. MacKie	Environmental Control and Vehicle Safety Engineer Ford Motor Company of Canada Limited
	T.E. Swann	Associate Environmental Control and Vehicle Safety Engineer Ford Motor Company of Canada Limited
	D.A. Brodie	General Service and Quality Manager General Motors of Canada Limited
	F.C. Fleck	Director, Engineering and Forward Planning (Chairman, Engineering Committee of Motor Vehicle Manufacturer Association) General Motors of Canada Limited
	W.A. Green	Vehicle Safety Engineer General Motors of Canada Limited
	C.L. Jenkins	Secretary and Treasurer General Motors of Canada Limited
	R.M. Quick	Staff Project Engineer General Motors of Canada Limited
	A.R. Scott	Director, Industry-Government Relations General Motors of Canada Limited
	N.A. Clark	Assistant General Manager Motor Vehicle Manufacturers' Association
	D.J. Aves	Secretary-Committees Motor Vehicle Manufacturers' Association

(1977)

January 11	H. J. Aiken	Executive Director, Executive Section Transportation Regulation Division Drivers and Vehicles Branch, MTC
	R. G. Gower	Director, Executive Section Transportation Regulation Division Drivers and Vehicles Branch, MTC
	R. H. Humphries	Assistant Deputy Minister Drivers and Vehicles Branch, MTC
	C. E. Laybourn	Administrator, Safety Standards and Practices Section, Transportation Regulation Division, Drivers and Vehicles Branch, MTC
	L. P. Lonero	Research Officer, Systems Research and Development Branch, MTC
	W. R. Quinton	Project Officer, Programme Development, MTC
	J. R. Millette	Member, Community Schools Section Curriculum Services Branch Ministry of Education
	T. P. Adams	Assistant Deputy Minister College Affairs and Manpower Training Division, Ministry of Colleges and Universities
	J. B. Hay	Superintendent, Private Vocational Schools Section, College Affairs Branch Ministry of Colleges and Universities
	R. A. Simpson	Executive Director, Business Practices Division Ministry of Consumer and Commercial Relations
	L. Wood	Director of Insurance Services Financial Institutions Division Ministry of Consumer and Commercial Relations
January 12	Dr. J. McKnight	President National Public Services Research Institute

(1977)

January 12	Dr. D. Pelz	Director, Centre for Research on Utilization of Scientific Knowledge Institute for Social Research University of Michigan
January 13	S.F. Andrunyk	General Manager, Ontario Safety League
	C. O'Hearn	Course Director, Ontario Safety League
	G.S. Palmer	Assistant General Manager; Manager, Traffic Safety, Ontario Safety League
	J.H. Cranford	Director of Communications Insurance Bureau of Canada
	W. Crawford	Immediate Past Chairman, Automobile Committee, Insurance Bureau of Canada
	D. Wagner	Chairman, Automobile Committee Insurance Bureau of Canada
	R.A. McInenly	Supervisor, Driver and Traffic Safety Education, Canada Safety Council
January 18	A.E. Argue	Executive Director, Executive Section Regional Operations Division Drivers and Vehicles Branch, MTC
	R.G. Gower	Director, Executive Section Transportation Regulation Division Drivers and Vehicles Branch, MTC
	R.H. Humphries	Assistant Deputy Minister Drivers and Vehicles Branch, MTC
	L.P. Lonero	Research Officer, Human, Social and Economics Research, Systems Research and Research Development, MTC
	H.D. Mosher	Executive Assistant, Executive Section Planning Division, Planning and Research Development (MTC Liaison Officer to the Committee)
	J.R. Pollock	Programme Administration Office Administrator, Regional Operations Div. Drivers and Vehicles Branch, MTC

(1977)

January 19	Dr. N. Kaestner	Oregon Traffic Safety Department University of Oregon
	Dr. P. Waller	University of North Carolina Institute of Highway Safety
January 20	Dr. M. Chipman	Department of Preventive Medicine University of Toronto
	Dr. J. Mackenzie	Chairman, Committee on Accidental Injuries, Ontario Medical Association
	Dr. C. Mortimer	Associate Professor of Ophthalmology University of Toronto
January 25	C. Wilson	Ministry of Transport, Ottawa
	R. M. McLeod	Senior Crown Counsel, Criminal Appeals and Special Prosecutions Ministry of the Attorney General
	D. M. Lucas	Director, Centre for Forensic Sciences Ministry of the Solicitor General
	A. A. Russell	Deputy Solicitor General Ministry of the Solicitor General
	W. J. G. Bolton	Chief Superintendent, Traffic Div. Ontario Provincial Police
	G. W. Hickingbottom	Inspector, Traffic Investigations Branch, Ontario Provincial Police
	H. J. Aiken	Executive Director Transportation Regulation Division Drivers and Vehicles, MTC
	Dr. P. W. Humphries	Senior Medical Consultant, Programme Consultation and Development Division Ministry of Correctional Services
	H. L. Silverman	Executive Director, Programme Consultation and Development Division Ministry of Correctional Services

(1977)

January 26	J.W.F. Bain	Director, Communications Branch Ministry of Health
	Dr. A.E. Leblanc	Director, Strategic Planning and Research, Ministry of Health
	Dr. B. Suttie	Assistant Deputy Minister, Community Health, Ministry of Health
	D. Pitt	Co-ordinator of Halfway Houses Rehabilitation Branch Ministry of Community and Social Services
	J.M. Metcalf	Education Officer, Student Activities and Special Projects Branch Ministry of Education
	Dr. P. Ennis	Addiction Research Foundation Committee on Drinking and Driving
	Dr. E. Sellers	Head, Clinical Research Unit Addiction Research Foundation Committee on Drinking and Driving
	Dr. R. Smart	Associate Research Director (Evaluation Studies) Addiction Research Foundation Committee on Drinking and Driving
	M. Stern	Program Consultant Addiction Research Foundation Committee on Drinking and Driving
	Dr. P. Whiteside	Addiction Research Foundation Committee on Drinking and Driving
January 27	Dr. J.L. Nichols	Chief, Driver Programs Branch National Highway Traffic Safety Administration, U.S. Dept. of Transportation
	H.D. Mosher	Executive Assistant, Executive Section Planning Division, MTC

(1977)

February 1	A.A. Russell	Deputy Solicitor General
	W.J.G. Bolton	Chief Superintendent, Traffic Division Ontario Provincial Police
	H.T. Garry	Staff Superintendent, Ontario Provincial Police
	G.W. Hickingbottom	Inspector, Traffic Investigations Br. Ontario Provincial Police
	R.G. Gower	Director, Executive Section Transportation Regulation Division Drivers and Vehicles Branch, MTC
	R.M. McLeod	Senior Crown Counsel, Criminal Appeals and Special Prosecutions Ministry of the Attorney General
	A. Campbell	Senior Crown Counsel Ministry of the Attorney General
	W. Boyle	Director, Driver Improvement Course North York Traffic Tribunal
February 2	Dr. L. Ross	Director, Program in Law and Social Sciences, U.S. National Science Foundation, Washington
	R. Cooper	Ministry of Transport, Ottawa
	Chief H. Adamson	Metropolitan Toronto Police
February 3	K. Joscelyn	Public Factors Division Highway Safety Research Institute University of Michigan
	C.S. Livingston	Director, Office of Driver and Pedestrian Programs, National Highway Traffic Safety Administration, Washington
February 9	H.J. Aiken	Executive Director, Executive Section Transportation Regulation Division Drivers and Vehicles Branch, MTC
	M.W. Hattin	Manager, Vehicle Standards Programme Development Branch, MTC
	R.H. Humphries	Assistant Deputy Minister Drivers and Vehicles Branch, MTC

(1977)

February 9	L. McPhee	Programme Administrator, Commercial Motor Vehicles Inspection Programme, MTC
	R. Valliere	Programme Administrator, Motor Vehicles Inspection Programme, MTC
February 10	R.R. Galpin	Chief, Vehicle Safety Programme Ministry of Transport
	J. Bear	Vice President, General Manager, Dodge Ontario Ontario & Toronto Automobile Dealers Association
	J. Bird	Executive Director, Ontario & Toronto Automobile Dealers Association
	R. Foster	Member, General Legislative Committee Ontario & Toronto Automobile Dealers Association
	J. Frame	President, Jack Frame Motors Ltd. Ontario & Toronto Automobile Dealers Association
	D. Ranney	President, Twin Hills Mercury Ontario & Toronto Automobile Dealers Association
	D.J. Aves	Secretary-Committees Motor Vehicle Manufacturers' Association
	N.A. Clark	Vice-President Motor Vehicle Manufacturers' Association
	G.L. MacKie	Environmental Control & Vehicle Safety Engineer, Ford Motor Company of Canada Limited
	R.M. Quick	Staff Project Engineer, General Motors of Canada Limited

(1977)

February 10	A.R. Scott	Director, Industry-Government Relations General Motors of Canada Limited
	D. Ten Veldhuis	Assistant Canadian Service Manager Mack Trucks Canada Limited
	J.E. Elliot	Director, Engineering, Quality and Vehicle Safety Chrysler Canada Limited
	R.F. Clifford	Director, Field Operations Volvo Canada Ltd.
February 15	K.V. Godfrey	Manager, Traffic Safety Research Insurance Corporation of British Columbia
	W.J. Cooper	Director, Corporate Affairs, Ontario Gulf Oil Canada Limited
	J.R. Hamilton	Manager, Motorist Market, Ontario Gulf Oil Canada Limited
	J.S. Shave	Retailing Adviser, Head Office Marketing, Gulf Oil Canada Limited
	G.P. Norris	Ontario Retail Operations Manager Imperial Oil Limited
	A.W. Tero	Retail Operations Supervisor Imperial Oil Limited
February 16	Dr. A.L. Burgett	Safety Standards Engineer, Office of Crashworthiness, National Highway Traffic Safety Administration Washington
	Dr. P. Miller	MGA Research Corporation
February 17	J. Bates	Legislative Action Chairman Ontario Federation of Home and School Associations
	A. Camire	Resolutions Chairman Ontario Federation of Home and School Associations

(1977)

February 17	M. Lister	President, Ottawa Home and School Council, Ontario Federation of Home and School Associations
	R. Clee	Saranac Parents' Association Committee on School Bus Safety, North York Board of Education
	W. Jackson	Chief Engineer, Committee on School Bus Safety, North York Board of Education
	H. Koehler	Trustee, Committee on School Bus Safety, North York Board of Education
	J. Treasure	Chairperson, Committee on School Bus Safety, North York Board of Education
	H.D. Mosher	Executive Assistant, Executive Section MTC
February 22	H.J. Aiken	Executive Director, Executive Section Transportation Regulations Division Drivers and Vehicles Branch, MTC
	L. McPhee	Programme Administrator, Commercial Motor Vehicles, Inspection Programme MTC
	F. Snelgrove	Manager, Commercial Vehicle Operations and Safety Research, MTC
	J. Gleason	Manager, Traffic Operations, MTC
	T. Cunliffe	Manager, Human, Social and Economic Research, MTC
February 23	Dr. E. Mikulcik	Associate Professor, Mechanical Engineering, University of Calgary
	D. Mela	Chief, Mathematical Analysis Division National Centre for Statistics and Analysis, National Highway Traffic Safety Administration, U.S. Department of Transportation, Washington
February 24	Dr. S. Sacks	Office of Crash Avoidance, Handling and Stability Division, National Highway Traffic Safety Administration, U.S. Department of Transportation, Washington

(1977)

March 1	Dr. J. Ellis	Head, Department of Automobile Engineering, Cranfield Institute of Technology, Bedford, England
	F. Snelgrove	Manager, Commercial Vehicle Operations and Safety Research, MTC
March 2	D. Andrew	Member, Engineering Committee Ontario Trucking Association
	M. Donnelly	Chairman of the Board Ontario Trucking Association
	J.O. Goodman	Executive Vice-President Ontario Trucking Association
	R. Haystead	Member, Safety Committee Ontario Trucking Association
	B. MacKay	Member, Freight Claims Bureau Ontario Trucking Association
	A. Fraser	President, National Tank Truckers Inc. Washington
	J. Hayes	John R. Hayes and Co. Ltd. Mississauga
	T.D. Sherard	Chief Engineer, Western Highway Institute, California
March 3	H.F. Gilbert	Deputy Minister MTC
	Dr. H. Simpson	Traffic Injury Research Foundation of Canada, Ottawa
	Dr. G.J.S. Wilde	Queen's University, Kingston

(1977)

August 10	D. H. McPherson	President General Motors of Canada Limited
	G. S. Bahling	General Motors Technical Center General Motors Corporation
	M. J. Gauvin	Administrator, Industry-Government Relations Department General Motors of Canada Limited
	W. A. Green	Vehicle Safety Engineer General Motors of Canada Limited
	D. E. McLean	Staff Project Engineer, Experimental General Motors of Canada Limited
	A. R. MacNab	Staff Project Engineer General Motors of Canada Limited
	R. M. Quick	Staff Project Engineer General Motors of Canada Limited
	N. A. Clark	Assistant General Manager Motor Vehicles Manufacturers' Association
	D. J. Aves	Secretary-Committees Motor Vehicles Manufacturers' Association

RECOMMENDATIONS OF THE COMMITTEE

IN THE ORDER PRESENTED IN THE REPORT

- II-1 THE GOVERNMENT OF ONTARIO SHOULD ACCEPT THE RESPONSIBILITY FOR DEVELOPING AND EVALUATING A DRIVER TRAINING PROGRAM FOR ONTARIO THAT MEETS SPECIFIC SAFETY OBJECTIVES
- II-2 THE GOVERNMENT OF ONTARIO SHOULD CLEARLY AND PUBLICLY DESIGNATE THE MINISTRY OF CONSUMER AND COMMERCIAL RELATIONS AS THE APPROPRIATE AGENCY FOR THE STRICT AND ACTIVE ENFORCEMENT OF ALL RELEVANT CONSUMER PROTECTION LEGISLATION
- II-3 THE GOVERNMENT OF ONTARIO SHOULD DEVELOP AND IMPLEMENT A NEW SET OF STANDARDS FOR A NEW CLASS OF DRIVING INSTRUCTOR'S CERTIFICATE, REQUIRING FAR GREATER KNOWLEDGE AND TEACHING SKILL THAN THE CURRENT PERMIT
- II-4 THE GOVERNMENT OF ONTARIO SHOULD ENCOURAGE COMMUNITY COLLEGES TO OFFER A DRIVING INSTRUCTION PROGRAM THAT WILL OFFER TRAINING TO THE STANDARD OF THE NEW CERTIFICATE
- II-5 THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD URGE ALL NEW MOTORCYCLE DRIVERS TO TAKE THE CANADA SAFETY COUNCIL MOTORCYCLE TRAINING COURSE, AND SHOULD ENCOURAGE ITS SPREAD TO CENTRES NOT NOW BEING SERVED
- III-1 THE GOVERNMENT OF ONTARIO SHOULD AMEND THE HIGHWAY TRAFFIC ACT SO THAT A DRIVER WHO IS FOUND GUILTY OF AN OFFENCE WILL ACCUMULATE DEMERIT POINTS FROM THE DATE ON WHICH THE OFFENCE TOOK PLACE

- III-2 THE GOVERNMENT OF ONTARIO SHOULD PROCEED WITH ITS PREVIOUSLY ANNOUNCED PROGRAM OF HAVING THE LICENCEE'S PHOTOGRAPH IMPRINTED ON THE DRIVING LICENCE
- III-3 THE GOVERNMENT OF ONTARIO SHOULD DEVELOP AND IMPLEMENT A TWO-YEAR PROBATIONARY LICENCE FOR DRIVERS RECEIVING THEIR FIRST LICENCE THAT WOULD HAVE THE FOLLOWING FEATURES:
- (1) A WARNING LETTER ISSUED AT THREE DEMERIT POINTS
 - (2) A PERSONAL INTERVIEW CONDUCTED AT SIX POINTS
 - (3) A DRIVER-IMPROVEMENT COURSE REQUIRED AT NINE POINTS
 - (4) A THREE-MONTH SUSPENSION APPLIED AT 12 POINTS
 - (5) AT THE DISCRETION OF THE COURT, ADDITION OF A YEAR TO THE PROBATIONARY PERIOD IF THE DRIVER GIVES CONTINUOUS EVIDENCE OF IRRESPONSIBLE BEHAVIOUR
- III-4 THE GOVERNMENT OF ONTARIO SHOULD REQUIRE THAT EVERY LICENSED DRIVER SUBMIT A FORM COMPLETED BY A PHYSICIAN CERTIFYING THAT, TO THE BEST OF THE PHYSICIAN'S KNOWLEDGE, THE DRIVER DOES NOT SUFFER FROM ANY OF THE SPECIFIED MEDICAL LIMITATIONS, AT EACH LICENCE RENEWAL FOLLOWING THE DRIVER'S 50TH BIRTHDAY
- III-5 THE GOVERNMENT OF ONTARIO SHOULD REQUIRE THAT AN EYE EXAMINATION BE ROUTINELY REQUIRED AT EACH LICENCE RENEWAL AFTER THE APPLICANT'S 70TH BIRTHDAY

- III-6 THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD BE GIVEN THE DISCRETION TO ISSUE AN APPROPRIATELY RESTRICTED LICENCE TO PERSONS WHO FOR PHYSICAL OR MEDICAL REASONS CAN DRIVE SAFELY ONLY ON A LIMITED BASIS
- IV-1 THE GOVERNMENT OF ONTARIO SHOULD INSTRUCT THE LIQUOR LICENCE BOARD OF ONTARIO TO DEVELOP AND APPLY NEW RESTRICTIVE GUIDELINES ON ADVERTISING PROMOTING ALCOHOL TO FURTHER RESTRICT "LIFESTYLE" ADVERTISING
- IV-2 THE GOVERNMENT OF ONTARIO SHOULD REQUIRE THAT ALL DRUGS THAT ARE KNOWN OR SUSPECTED TO CAUSE IMPAIRMENT - ALONE OR IN CONJUNCTION WITH ALCOHOL - BE CLEARLY LABELLED WITH AN APPROPRIATE WARNING BY THE DISPENSING PHARMACIST
- IV-3 THE GOVERNMENT OF ONTARIO SHOULD RAISE THE LEGAL DRINKING AGE TO 19
- IV-4 THE GOVERNMENT OF ONTARIO SHOULD IMPOSE A THREE-MONTH LICENCE SUSPENSION AND CONCURRENTLY EXTEND THE PERIOD OF THE PROBATIONARY LICENCE FOR ONE YEAR OF ANY PROBATIONARY LICENCE HOLDER CONVICTED OF DRINKING WHILE UNDER THE LEGAL DRINKING AGE, IF THAT PERSON WAS DRIVING WHEN APPREHENDED FOR UNDER-AGE DRINKING
- IV-5 THE GOVERNMENT OF ONTARIO SHOULD ENACT LEGISLATION TO EMPOWER THE POLICE TO SUSPEND FOR 24 HOURS THE LICENCE OF A DRIVER WITH A BLOOD ALCOHOL LEVEL OF 50 TO 100 MILLIGRAMS OF ALCOHOL PER 100 MILLILITRES OF BLOOD AS MEASURED ON AN "ALERT" MACHINE. FURTHER, THE ONTARIO PROVINCIAL POLICE SHOULD BE EQUIPPED AND DIRECTED TO ENFORCE THIS NEW LEGISLATION

IV-6

THE GOVERNMENT OF ONTARIO SHOULD ESTABLISH A COMPREHENSIVE PROGRAM FOR DEALING WITH OFFENDERS CONVICTED UNDER THE DRINKING AND DRIVING SECTION OF THE CRIMINAL CODE. THIS PROGRAM WOULD HAVE THE FOLLOWING COMPONENTS:

1. A PRE-SENTENCE INVESTIGATION OF CONVICTED OFFENDERS TO GUIDE IN RENDERING THE MOST APPROPRIATE SENTENCE
2. A COMPULSORY EDUCATIONAL PROGRAM FOR ALL CONVICTED OFFENDERS ASSESSED TO HAVE CONTROL OF THEIR DRINKING BEHAVIOUR
3. A SET OF COMPULSORY TREATMENT ALTERNATIVES TAILORED TO THE NEEDS OF CONVICTED OFFENDERS ASSESSED TO LACK CONTROL OF THEIR DRINKING BEHAVIOUR

IV-7

THE GOVERNMENT OF ONTARIO SHOULD ENSURE THAT IN IMPLEMENTING THE NEW PROGRAM FOR OFFENDERS CONVICTED OF DRINKING-DRIVING OFFENCES, ADEQUATE ATTENTION AND FUNDING IS DEVOTED TO CONTINUOUS EVALUATION AND REAPPRAISAL OF ALL ASPECTS OF THE PROGRAM

V-1

THE GOVERNMENT OF ONTARIO SHOULD CAREFULLY EVALUATE THE ENFORCEMENT POLICIES AND PRACTICES AIMED AT ROAD SAFETY NOW BEING USED BY POLICE FORCES IN ONTARIO WITH A VIEW TO ENCOURAGING THE INTRODUCTION OF A MORE RIGOROUS SELECTIVE ENFORCEMENT PROGRAM AT THE EARLIEST POSSIBLE DATE

V-2

THE GOVERNMENT OF ONTARIO SHOULD ENSURE THAT ALL OPP DETACHMENTS ARE PROPERLY EQUIPPED TO ENFORCE CURRENT LAWS AND, IN PARTICULAR, THAT EACH DETACHMENT BE EQUIPPED WITH A BREATH-ALYZER

- V-3 THE GOVERNMENT OF ONTARIO SHOULD INSTALL REMOTE, RADAR-CONTROLLED, SPEED-MEASURING CAMERAS AND "DUMMY" CAMERAS ON DANGEROUS STRETCHES OF ROAD
- V-4 THE GOVERNMENT OF ONTARIO SHOULD ENACT LEGISLATION ALLOWING THE REGISTERED OWNER OF A VEHICLE TO BE "TICKETED" FOR SPECIFIED OFFENCES WHEN IDENTIFIED BY THE HIGHLY VISIBLE REMOTE CAMERAS
- V-5 THE GOVERNMENT OF ONTARIO SHOULD ENACT LEGISLATION AT THE EARLIEST POSSIBLE MOMENT TO BAN THE SALE AND THE INSTALLATION AND USE OF ALL RADAR DETECTION DEVICES IN ALL MOTOR VEHICLES
- V-6 THE GOVERNMENT OF ONTARIO SHOULD BUILD ON THE TRAFFIC TRIBUNAL CONCEPT BY:
- CAREFULLY EVALUATING AND MONITORING THE CONTINUING RESULTS OF THE NORTH YORK TRAFFIC TRIBUNAL
 - BREAKING DOWN THE COMPONENTS OF THE NORTH YORK SYSTEM TO DETERMINE THE EFFECT OF EACH PART
 - SPREADING THE TRIBUNAL SYSTEM ACROSS THE PROVINCE BASED ON THE INFORMATION GATHERED IN NORTH YORK
- V-7 THE GOVERNMENT OF ONTARIO SHOULD GIVE ONE OF THE ENFORCEMENT AGENCIES THE RESPONSIBILITY FOR COORDINATING THE TRAFFIC LAW ENFORCEMENT SYSTEM
- VI-1 THE ONTARIO POLICE SHOULD PLACE GREATER EMPHASIS ON ENFORCING CURRENT SEAT-BELT LEGISLATION

VI-2 THE GOVERNMENT OF ONTARIO SHOULD TAKE AN ACTIVE PART IN SUPPORTING AND DIRECTING THE FEDERAL GOVERNMENT IN THE DEVELOPMENT OF STANDARDS FOR IMPROVING THE SAFETY OF AUTOMOBILES, AND IN PARTICULAR, SHOULD SUPPORT THE INTRODUCTION OF AMBER TURN SIGNALS ON ALL CARS SOLD IN CANADA AND THE EARLY INTRODUCTION OF WIDE, SMOOTH, RUBBER-COATED SAFETY BUMPERS ON ALL CARS SOLD IN NORTH AMERICA

VI-3 THE GOVERNMENT OF ONTARIO SHOULD URGE THE FEDERAL GOVERNMENT TO MAKE PASSIVE RESTRAINT SYSTEMS MANDATORY IN ALL NEW CARS SOLD IN CANADA, BUT IT SHOULD CONTINUE TO REQUIRE USAGE OF THE FULL THREE-POINT SEAT BELT IN ONTARIO TO MAXIMIZE THE EFFECTIVENESS OF AIR BAG SYSTEMS

VI-4 THE GOVERNMENT OF ONTARIO SHOULD INVESTIGATE ALL WIDELY AVAILABLE OPTIONS THAT ADD SAFETY VALUE TO THE VEHICLE AND MAKE THOSE MANDATORY THAT ARE OF PARTICULAR VALUE TO THE PROVINCE, AND SPECIFICALLY, SHOULD REQUIRE ALL NEW VEHICLES SOLD IN THE PROVINCE TO BE EQUIPPED WITH REAR-WINDOW DEFROSTERS

VI-5 THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD EXTEND ITS MOTOR VEHICLE INSPECTION SYSTEM THROUGH LICENSED STATIONS TO INCLUDE:

- ANNUAL INSPECTION OF CARS FIVE YEARS OLD OR OLDER
- INSPECTION OF EVERY CAR RECEIVING MORE THAN \$800 DAMAGE IN AN ACCIDENT

VI-6 THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD ENCOURAGE MOTOR VEHICLE OWNERS TO SEEK ANNUAL INSPECTION OF THEIR VEHICLES ON A VOLUNTARY BASIS

- VI-7 THE GOVERNMENT OF ONTARIO SHOULD CHANGE THE INSPECTION STANDARD FOR SHOCK ABSORBERS TO SPECIFY "GOOD WORKING ORDER"
- VI-8 THE GOVERNMENT OF ONTARIO SHOULD BAN THE SALE AND THE INSTALLATION AS WELL AS THE USE OF UNAPPROVED AFTER-MARKET COMPONENTS
- VII-1 THE GOVERNMENT OF ONTARIO SHOULD ACCEPT RESPONSIBILITY FOR GATHERING, EVALUATING, AND DISSEMINATING INFORMATION ON EQUIPMENT, SAFETY FEATURES AND OPERATION OF SCHOOL BUSES
- VII-2 THE GOVERNMENT OF ONTARIO SHOULD REQUIRE THAT ALL VEHICLES UNDER CONTRACT TO A SCHOOL BOARD AND USED FOR THE TRANSPORTATION OF SCHOOL CHILDREN BE GIVEN A SAFETY INSPECTION BY A LICENSED MECHANIC EVERY SIX MONTHS
- VIII-1 THE GOVERNMENT OF ONTARIO SHOULD REQUIRE A WIDE BAND OF REFLECTORIZED MATERIAL ON THE REAR OF ALL VEHICLES OVER 18,000 POUNDS, OR THOSE THAT CORRESPOND TO CLASSES A, B, C AND D OF THE CLASSIFIED DRIVER LICENSING SYSTEM
- VIII-2 THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD WORK WITH THE TRUCKING INDUSTRY TO CODIFY A SET OF REGULATIONS FOR LOADING AND OPERATION OF ALL TRUCKS DRIVING IN ONTARIO THAT MEETS THE BEST INDUSTRY SAFETY STANDARDS
- VIII-3 THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD ISSUE A SPECIAL LICENCE TO ALL OWNERS OF "DOUBLES", AND WORK WITH THE LICENSED OPERATORS TO ESTABLISH SUITABLE STANDARDS FOR THEIR MAINTENANCE, DRIVER CONTROL AND TRUCK LOADING PROCEDURES. IT SHOULD REVOKE THE LICENCE IF THESE STANDARDS ARE NOT MET

- VIII-4 THE GOVERNMENT OF ONTARIO SHOULD URGE STRENUOUSLY THAT THE FEDERAL GOVERNMENT ADOPT THE U. S. 121 BRAKE STANDARD FOR TRUCKS
- VIII-5 THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD MAINTAIN THE CURRENT 65-FOOT LENGTH LIMIT FOR TRUCKS TRAVELLING ON ONTARIO ROADS
- VIII-6 THE GOVERNMENT OF ONTARIO SHOULD PRESS THE FEDERAL GOVERNMENT FOR EARLY INTRODUCTION OF NATIONAL REGULATIONS FOR THE TRANSPORTATION AND LABELLING OF HAZARDOUS LOADS. IF NATIONAL REGULATIONS ARE NOT FORTHCOMING WITHIN 12 MONTHS, THE GOVERNMENT OF ONTARIO SHOULD UNILATERALLY IMPLEMENT ITS OWN
- VIII-7 THE GOVERNMENT OF ONTARIO SHOULD EXTEND THE DUMP TRUCK INSPECTION PROGRAM ON A PHASED BASIS TO ALL COMMERCIAL CARRIERS
- IX-1 THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD AMEND ITS STANDARDS FOR THE LOCATION OF STOP SIGNS TO ALLOW THEIR ERECTION, AT THE REQUEST OF A MUNICIPALITY, AT RAILWAY LEVEL CROSSINGS
- IX-2 THE GOVERNMENT OF ONTARIO SHOULD URGE THE FEDERAL GOVERNMENT TO MAKE REFLECTORIZED MARKINGS MANDATORY ON THE SIDES OF ALL RAILCARS
- IX-3 THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD EVALUATE THE SAFETY POTENTIAL OF THE WRAP-AROUND POLE
- IX-4 THE GOVERNMENT OF ONTARIO SHOULD MAINTAIN THE LOWERED SPEED LIMITS EVEN IF ENERGY SUPPLY CONDITIONS EASE

- IX-5 THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD INVESTIGATE THE FEASIBILITY OF INTRODUCING A "CONDITIONS AHEAD" WEATHER WARNING SYSTEM
- IX-6 THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS SHOULD BE COMMENDED FOR ITS EFFORTS TO CREATE A SAFELY DESIGNED HIGHWAY SYSTEM, AND SHOULD BE ENCOURAGED TO CONTINUE ITS EFFORTS IN THIS REGARD
- X-1 THE GOVERNMENT OF ONTARIO SHOULD APPOINT A ROAD SAFETY COORDINATOR REPORTING TO THE DEPUTY MINISTER OF THE MINISTRY OF TRANSPORTATION AND COMMUNICATIONS TO DEVELOP AND COORDINATE THE OVERALL ROAD SAFETY PROGRAM WITHIN THE GOVERNMENT STRUCTURE, BE A POINT OF CONTACT WITH INTERESTED GROUPS OUTSIDE THE GOVERNMENT, AND MONITOR ROAD SAFETY ACTIVITY THROUGHOUT THE WORLD
- X-2 THE GOVERNMENT OF ONTARIO SHOULD ASSIGN RESPONSIBILITY FOR DEVELOPING A PROVINCIAL CRASH RESCUE PROGRAM TO THE ROAD SAFETY COORDINATOR
- X-3 THE GOVERNMENT OF ONTARIO SHOULD PRESS FOR THE CREATION OF A FEDERAL-PROVINCIAL BODY THAT WOULD SUGGEST PRIORITIES FOR FEDERAL ROAD SAFETY RESEARCH AND COORDINATE ALL ROAD SAFETY RESEARCH ACTIVITIES OF GOVERNMENTS IN CANADA
- X-4 THE GOVERNMENT OF ONTARIO SHOULD GIVE THE HIGHEST PRIORITY IN ROAD SAFETY RESEARCH TO THE EVALUATION OF THE EFFECTIVENESS OF CURRENT ROAD SAFETY PROGRAMS



